University of Alberta

'Because' – An Explanation of the Pragmatics Involved in Understanding 'Because'

by

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"There are obvious dangers in using words without being sure what we mean by them. But there is another danger, though less obvious in trying to provide exact definitions. The danger is that we may think we have succeeded."
~Alan Wood

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Chapter One:
Indicating Arguments & Explanations

1.1 Introduction

In this chapter, I propose that 'because' functions analogously to 'therefore' in that they both may indicate either an argument or an explanation. I will begin by addressing the contemporary literature on 'therefore' and 'because.' Contemporary logic texts agree that both 'therefore' and ''because' may indicate either an argument or an explanation. However, they do not support this claim, which is unexpected given the discrepancy between this claim and those made by Carl Hempel and by Gilbert Ryle. Most philosophers of science agree that modern scientific explanation theory was founded by Hempel, while Ryle wrote possibly the most influential paper about the meaning of 'therefore' and 'because.' I will discuss Hempel's claim that explanations *are* arguments, and then attack Ryle's claim that while 'therefore' *usually* indicates an argument, 'because' *always* indicates an explanation. Using examples of arguments and explanations, I will demonstrate that the contemporary texts are correct—'therefore' and 'because' may both indicate either an argument or an explanation—while giving support for this conclusion. Because of their similar function, I conclude that 'therefore' and 'because' can be considered functionally equivalent.

When I claim that 'therefore' and 'because' are "functionally equivalent," I simply mean that 'therefore' and because' share the same two functions: indicating an argument and indicating an explanation. This is *not* to say that 'therefore' and 'because' are interchangeable - there are differences in the grammar governing the application of 'therefore' and 'because,' however, this *is* to say that 'therefore'-*statements* and 'because'-*statements* are interchangeable.

In Chapter Two, I will attempt to explain how 'because' and 'therefore' indicate arguments and explanations. I will do this by borrowing heavily from the ideas of Steven Rieber, specifically from his account of 'therefore.' Rieber claims that sentence connectives, such as 'therefore,' carry as conventional implicatures tacit performatives. In the case of 'therefore,' he believes the tacit performative to be, "And I suggest this is a consequence." I will modify Rieber's account of 'therefore' and apply it to 'because.'

Finally, in the last chapter, I will examine the concept of explanation. I will briefly discuss Bas Van Fraassen's pragmatic theory of explanation so that we may understand his evaluation procedure for explanations. When we examine his evaluation procedure, we will see that it is dependant upon indications made by 'because' and yet he does not provide any account of 'because.' I will thus conclude that my modified-Rieberian theory of 'because' complements Van

Fraassen's theory, and in turn the combination of his theory with mine, gives us a comprehensive theory of 'because' and of explanation.

1.2 'Because' and 'Therefore'

The Oxford English Dictionary says that 'because' is a sentence connective, which is derived from "by the cause" and which cites one thing as the cause of another (2nd ed. Vol. 2, 41). However, since Hume's notorious discussion of causation, having 'because' tied to causal terms seems to add an undesirable element of uncertainty. Mark Sainsbury suggests that in some instances 'because' functions as a binary sentence connective, but then remarks: "Perhaps a more promising suggestion is that 'because' is not really a sentence connective at all, but rather functions, somewhat analogously to "therefore" to mark an act of inference." (113) The Oxford English Dictionary says that 'therefore' marks a conclusion, that it expresses conclusion or inference, and that 'therefore' is synonymous with 'consequently,' and 'as a result or inference from what has been stated.' (2nd ed. Vol. 17, 909)

A survey of introductory logic and philosophy text books reveal common claims about these two words which agree with Sainbury's suggestion. The authors begin by listing a number of words which can be used to help identify arguments. These words they call 'indicator words.' They claim that 'therefore,'

'consequently,' 'necessarily,' 'hence,' 'it follows that,' 'for that reason,' 'thus,' and 'so' all indicate an argument's conclusion.[1] In, A Practical Study of Argument, Govier writes:

> The word 'so' is one of a large number of words that logicians call *indicator words*. These words may indicate the presence of an argument. Some come before the premise or premises; others before the conclusion. Here are some of the many indicator words and phrases that come before the premises in arguments:
>
> Since
> Because
> For
> Follows from
> As shown by
> As indicated by
> May be inferred from
> May be derived from
> May be deduced from
> For the reasons that
>
> Indicator words and phrases that come before the conclusion in an argument include the following:
>
> Thus
> Therefore
> Hence
> Accordingly
> For all these reasons we can see that
> On these grounds it is clear that
> Consequently
> Proves that
> It follows that
> We can conclude that
> Demonstrates that (3-4)

In The Art of Reasoning, David Kelley echoes Govier's thoughts. He writes:

> For example, the word 'therefore' indicates that a statement is intended as a conclusion. The word 'because' usually indicates a premise. There are

---

[1] For brevity and simplicity of discussion, I will henceforth use 'therefore' to refer to whole Therefore Family of words: 'therefore,' 'consequently,' 'necessarily,' 'hence,' 'it follows that,' 'for that reason,' 'thus,' and 'so.'

many such indicator words and phrases in English. Here is a list of the more common ones:

Premise indicators	*Conclusion indicators*
Since	Therefore
Because	Thus
As	So
For	Consequently
Given that	As a result
Assuming that	It follows that
Inasmuch as	Hence
The reason is that	Which means that
In view of the fact that	Which implies that

When you encounter such words, it is good sign that you are in the presence of an argument, and you can use the indicators to distinguish the premises from the conclusion. (94-95)

Finally, Merrilee Salmon, in Introduction to Logic and Critical Thinking, agrees with the above two accounts when she says:

> Recognizing arguments is sometimes relatively easy because certain words in English, called indicator words, signal the presence of either premises or conclusions of arguments. In several of the arguments presented already, the word 'therefore' served to introduce conclusions. This is such a common use of the term in English that whenever 'therefore' occurs we should be alert to the possibility that an argument is being presented – or at least intended. Other terms often used to indicate the conclusion of an argument are 'thus,' 'and so,' 'consequently,' necessarily,' 'hence,' it follows that,' and 'for that reason.' Terms commonly used to indicate premises are 'because,' 'since,' 'for,' and 'for the reason that.' (10-11)

Obviously however, by indicating either a premise or a conclusion, one is indicating the other as well. Thus I make what I believe to be an uncontroversial claim: 'therefore' indicates that the statements prior to 'therefore' are premises, and the statements following 'therefore' are conclusions. Similarly, 'because' indicates that the statements prior to 'because' are the conclusions, and the statements following 'because' are the premises. The texts are quick to note that

arguments need not be sign-posted with these premise- and conclusion-indicator words. Kelley is careful to point out that "the absence of indicator words does not necessarily mean the absence of an argument." (95) The use of indicator words is merely a useful tool in the identification of arguments as generally when they are used, they make explicit the structure of the argument by indicating the premises and conclusions. For example, let us consider the two arguments, "Socrates is a man; All men are mortal; Therefore Socrates is mortal," and "Socrates is a man; All men are mortal; Socrates is mortal." In the first example, we can see the argument being made explicitly, with the use of 'therefore,' while the same argument is made implicitly in the second example, without the inclusion of any indicator word(s).

Just as arguments do not necessarily include any indicator words, the indicator words listed above do not necessarily indicate an argument when they are used. Although the above authors have said that indicator words such as 'therefore' and 'because' are often used to indicate an argument, this is not always the case. The texts continue, stating that words such as 'because,' 'since,' 'for,' and 'for the reason that,' indicate the contributing factors in an explanation.[2] Kelley notes, "A final point to keep in mind is that many of the words listed above can be used to indicate an *explanation* rather than an argument." (95) Govier develops this

---

[2] Again, for brevity and simplicity, I will henceforth use 'because' to refer to the whole 'because' family of words: 'because,' 'since,' 'for,' and 'for the reason that.'

thought: "The very words that are so often used before the conclusion of an argument --words such as *therefore, so,* and *thus*-- are also often used before the statement that describes what is explained in an explanation." (10) Furthermore, M. Salmon writes,

> We cannot simply assume that an argument is present each time these special words occur, because they have other uses in English as well . . . . 'Because' is frequently used to express a causal connection between two events rather than to offer evidence that one of those events occurred . . . Terms other than 'because' are also used to indicate a causal connection between events. 'For,' 'since,' 'thus,' and 'therefore' may all be used in this way. (11)

So, we can see that they all agree that the same indicator words which indicate arguments may also indicate explanations. As we discussed with arguments, when 'because' or 'therefore' indicates the contributing factors of an explanation, it is also pointing out, by default, the concluding event of the explanation.

M. Salmon also mentions that certain members of the 'therefore' and 'because' families have an alternative meaning which has nothing to do with indicating an argument or an explanation. She notes that 'since' may also be used to indicate passage of time. She provides the ambiguous example, "Since Harry has been away at college, he has been receiving his hometown paper in the mail," but as I find this example ambiguous, perhaps another example might demonstrate this difference more clearly: "Professor Smith has been sick since Monday." I do not believe that it is problematic to allow that 'since' has these two different meanings, and I am not at all reluctant to admit this distinction. However, for

the purposes of this paper, I intend to overlook the second meaning of 'since,' and focus solely on the meaning of 'since' which is synonymous with 'because.' Although not mentioned by M. Salmon, there is a similar problem with 'for' and 'so' which both also have a variety of meanings e.g. "The gift was *for* Gwen," and, "She was *so* helpful." Again, for the purposes of this paper I only intend the meaning of 'for,' 'so' and other multi-definitional indicator words which is synonymous with either 'therefore' or 'because.' Thus, with this disclaimer, I include 'since,' and 'for' in the 'because' family and 'so' in the 'therefore' family.

The possible claim that 'therefore' *most commonly* indicates an argument while 'because' *most often* indicates an explanation is irrelevant to our study, as I merely need to show that both can serve either purpose; if either word can serve either purpose, then the frequency with which they serve the different purposes does not matter.[3] It is sufficient for now to simply acknowledged this debate. In order to further discuss how arguments may be indicated by both 'therefore' and 'because' and how explanations may be indicated by both 'therefore' and 'because,' I will now briefly discuss a few examples of arguments and explanations.

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[3] In Section 1.4, I will discuss Gilbert Ryle's claim, as made in his paper, "'If,' 'So,' and 'Because,'" that while 'therefore'-statements are "most commonly" arguments, but 'because'-statements are *always* explanations.

1.3 Arguments and Explanations

Kelly begins his account of explanation by noting how uncertain the concepts of argument and explanation are. He states, "The theoretical relationship between arguments and explanations is complex and controversial. But it seems clear that there is at least a difference in emphasis." (562) He goes on to describe this difference in emphasis, the only undisputed difference between argument and explanation, as actually more of a difference in purpose than in emphasis:

> The difference between them [arguments and explanations] lies in their goals: an argument tries to show *that* something is true; an explanation tries to show *why* it is true.[4] (Kelly, 566)

Govier elaborates on this point,

> the purpose of an explanation is to provide understanding as to causes or patterns. Arguments offer justification; explanations offer understanding. Even though reasoning is used in both arguments and in explanations, and even though the same indicator words may appear in both, they have very different purposes. (Govier, 12)

Thus we might understand the difference between arguments and explanations to be a matter of the direction of our reasoning. Govier summarizes: "In an argument, premises are put forward as grounds to justify a conclusions as true," while "In an argument, claims are offered to make a further claim understandable." (10) In other words, in an argument we are reasoning from the known contributing factors to a possibly controversial conclusion. In an explanation, the final event is known, and we attempt to provide the factors

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[4] The italics are mine.

which contributed to the situation. In this way, arguments attempt to reason forward, while explanations reason backward.

Although both Govier and Kelly agree that there is at least one difference between explanations and arguments, they both state that indicator words such as 'therefore' and 'because' may indicate either an argument or an explanation. In fact, Govier writes that we can sometimes only tell the difference between an argument and an explanation by evaluating the context of the utterance. She states:

> Whether a set of statements expresses an argument or an explanation is often determined by the context in which it appears and our knowledge of what people would be likely to try to prove or justify in that context. (Govier, 10)

Thus we can see that arguments and explanations are very similar. By examining examples of arguments and explanations, we can see this similarity reflected in the function of 'therefore' and 'because' as indicators of arguments and explanations.

Let us return to the division between arguments and explanations we previously noted. Govier provides us with two dialogue examples which she believes illustrate the difference. Govier writes,

> We shall look at two imaginary dialogues in order to bring out the different purposes of arguments and explanations. We shall suppose that two businessmen, Smith and Wilson, have a business that offers second mortgages. Wilson takes the business into a town called Slumptown, where

the people have little money to buy homes and where there is, as a result, a great demand for second mortgages. Wilson and Smith operate profitably in Slumptown for several years, but then the economy of Slumptown worsens, and many people are forced to default on their mortgages. Smith and Wilson lose heavily. We can easily imagine the following dialogue between them:

> ***Dialogue I***
>
> **Wilson**: Well, it's too bad we lost so much, but you can't win all the time. I just don't understand how it happened.
>
> **Smith**: Actually, it's perfectly understandable. The causes of our good business in Slumptown were the poverty of the people and the bad job market there. Because the people could not quite afford the houses they bought, the market for second mortgages was good. And yet these factors did indicate how vulnerable Slumptown's economy was. When powerful XYZ company laid off workers, people in Slumptown were worse off than before, and they just couldn't keep up with the payments on their houses. It is easy to see what led to our losses in Slumptown.

There is no argument offered by Smith here. Smith is explaining why he and Wilson lost their money. Now look at dialogue II which does contain an argument and does not explain anything.

> ***Dialogue II***
>
> **Wilson**: We were unlucky in Slumptown. Perhaps we should transfer the firm to Hightown, down the road. In Hightown, there are plenty of jobs, the real estate market is booming and people are crying out for second mortgages.
>
> **Smith**: That would be a mistake, I think. Hightown is different from Slumptown in many ways, but it is similar in having a vulnerable economy. All of the economic activity in Hightown depends on one aircraft parts firm, which is expanding at the moment. If the firm loses a contract with Nigeria, it will have to lay off thousands of workers, and Hightown's economy will be very severely affected. In such a situation, Hightown would become another Slumptown, and we would have the same problem with defaults all over again. (12-13)

Govier gives us these dialogues as clear examples of explanation and argument respectively. The first dialogue reasons from the explanandum back to the explanans. This is to say, Wilson reasons from the known result, to speculate as to the earlier events. In the second dialogue, Wilson uses an argument to convince Smith of the probability of disastrous results should they relocate to

Hightown. He argues from known premises, facts about Slumptown, Hightown and the economies of both towns, to the unrealized conclusion, that they would likely suffer the same losses in Hightown as they suffered in Slumptown. Thus we can see, with Govier's example, the difference between explanations and arguments. Using Kelley's terminology of purposes, Wilson's first answer was intended to show why they lost money doing business in Slumptown, that is, to explain. Wilson's second answer was intended to predict, to show how things would work out, or rather, *not* work out, for them in Hightown, that is, he argued for the position of not relocating to Hightown.

Before we discuss any more examples, I wish to note an important observation of M. Salmon's: "whenever 'therefore' [or 'because'] occurs we should be alert to the possibility that an argument is being presented – *or at least intended.*"[5] This is to say, that 'therefore' and 'because' may merely indicate an *intended* argument, not necessarily a logically sound, or valid argument. That people may use 'therefore' and 'because' incorrectly, such as to present a flawed argument or an incorrect explanation, cannot and should not affect the function of 'therefore' and 'because' any more than a child's mistaken statements of arithmetic affect the meaning of an equals sign. Thus the following examples are intended as examples of arguments and explanations, and M. Salmon and I agree that they can serve this purpose without being logically complete. Later I will discuss how

[5] Italics are mine.

missing premises can be accounted for by conventional implicature, but for now, it is sufficient to consider the following examples merely as intended arguments and explanations.

Let us consider two of M. Salmon's examples of arguments: "Women office workers work just as hard as men office workers, and are just as productive. Therefore women office workers should receive the same pay as men in comparable positions." (10) M. Salmon would say that 'therefore' indicates that "women office workers should receive the same pay as men in comparable positions" is the conclusion, and that 'therefore' also indicates that "Women office workers work just as hard as men office workers, and are just as productive" is the premise.

Another of M. Salmon's examples is: "Since private business is the most effective instrument of economic change, the government should utilize the resources of private business in its economic planning and decision making." (10) As previously discussed, I think it is unproblematic to substitute 'because' for 'since' and thus I believe it is unproblematic to do so in this example. Thus the reworded example would read: "Because private business is the most effective instrument of economic change, the government should utilize the resources of private business in its economic planning and decision making." In her analysis of this statement, M. Salmon is correct in saying,

> Here, "private business is the most effective instrument of economic change" is the premise. It purportedly supports the sentence that follows the comma. The premise is signalled by the indicator word "since" ["because"]. (10)

Thus we have an obvious example of a 'because'-argument. In other words, this is a clear example of 'because' indicating an argument.

Looking at M. Salmon's examples, we can show how 'therefore'-statements and 'because'-statements are interchangeable.

1. Women are as hard-working as men, and women are as productive as men **therefore** women should receive equal pay.
2. Women should receive equal pay **because** women are as hard-working as men, and women are as productive as men.

We can also use M. Salmon's second example to see how 'therefore' and 'because' can function equivalently.

3. **Because** private business is the most effective instrument of economic change, the government should utilize the resources of private business in its economic planning and decision making.
4. Private business is the most effective instrument of economic change; **therefore,** the government should utilize the resources of private business in its economic planning and decision making.

The structure of a 'therefore'-passage indicates that premises precede 'therefore' and the conclusion follows 'therefore.' Conversely, the structure of a 'because'-argument indicates that the premises are given in the 'because'-clause and are preceded by the conclusion. We can thus simplify the argument-function of 'therefore' and 'because' from the above Pay Equity and Economic Change examples.

5. A & B, **therefore,** C

6. **Because** A & B, C

'Therefore' indicates that A and B are the premises and that C is the conclusion. 'Because' indicates that A and B are the premises and that C is the conclusion. Thus it is obvious that 'therefore' and 'because' are very similar at least with regard their function of indicating an argument.

We can now understand the abstracted forms of arguments, and recognizing both the 'therefore' and the two 'because' variations:

'Therefore'-Argument	**'Because'-Argument**	**'Because'-Argument**
Premise 1	Conclusion,	*Because*
Premise 2	*Because*	Premise 1
Premise 3	Premise 1	Premise 2
Therefore,	Premise 2	Premise 3,
Conclusion.	Premise 3	Conclusion.

I think we can anticipate two similar variations, a 'therefore' and a 'because' version, of explanations:

'Therefore'-Explanation	**'Because'-Explanation**	**'Because'-Explanation**
Explanans 1	Explanandum,	*Because*
Explanans 2	*Because*	Explanans 1
Explanans 3	Explanans 1	Explanans 2
Therefore,	Explanans 2	Explanans 3,
Explanandum.	Explanans 3	Explanandum.

The above charts make very obvious the similarity I claim exists between the structure of arguments and explanations, and between the functions of 'therefore' and 'because.'

But let us now attempt to fit some examples of explanations to these variations to see if our hypothesis holds. Let us consider the function of 'therefore' and 'because' indicating explanations. Govier provides us with an example of an explanation:

> The window had been shut all summer and the weather was hot and damp. **So** the room smelled awfully musty when he returned.

We can format this example to both 'therefore' and 'because.' First, as discussed previously, I believe 'therefore' can be used interchangeably with 'so,' and with all the other members of the 'Therefore' Family. Hence, we can easily make this 'so'-explanation a 'therefore'-explanation.

'Therefore'-Explanation	
Factor (1)	The window had been shut all summer,
Factor (2)	And the weather was hot and damp,
	Therefore,
Event	The room smelled awfully musty when he returned.

We can also easily reformat this passage as a 'because'-explanation.

'Because'-Explanation	
	Because
Factor (1)	The window had been shut all summer
Factor (2)	And the weather was hot and damp,
Event	The room smelled awfully musty when he returned.

As we see with this example, 'therefore' and 'because' are also similar in that they both may indicate an explanation.

Thus, through the discussion of examples of both arguments and explanations, we have seen that arguments may be indicated by either 'therefore' or 'because' and that explanations may be indicated by either 'therefore' or 'because.'

1.4 Hempel's Influence?

In the accounts given by Govier and Kelley, they say that arguments and explanations differ, at the very least, because they have different purposes. They say that one may not be able to tell whether a passage is meant as an argument or an explanation without examining the context of the passage to determine what the likely purpose of the passage is. However, all this assumes a separation between arguments and explanations, a separation which is denied by the most recognized view of scientific explanation.

Wesley Salmon claims that the ideas of Carl Hempel and Paul Oppenheim are the foundation of our modern view of scientific explanation. W. Salmon writes:

> Forty years ago a remarkable event occurred. Carl. G. Hempel and Paul Oppenheim published an essay, "Studies in the Logic of Explanation," which was truly epoch-making. It set out, with unprecedented precision and clarity, a characterization of one kind of deductive argument that, according to their account, does constitute a legitimate type of scientific explanation. . ."This 1948 article provided the foundation for the old consensus on the nature of scientific explanation that reached its height in the 1960s. A large preponderance of the philosophical work on scientific explanation in the succeeding four decades has occurred as a direct or

indirect response to this article. If we wish to assess the prospects for a new consensus on scientific explanation, this is where we must start. (3-4)

Given the influence of Hempel's work, it is strange that the contemporary logic books propose conflicting ideas without any mention of the conflict with Hempel's established position that explanation is a subcategory of argument. Hempel proposed the deductive-nomological model of argument:

> If we imagine the various explicit or tacit explanatory assumptions to be fully stated, then the explanation may be conceived as a deductive argument of the form:
>
> $$\left.\begin{array}{l} C, C_2, \ldots, C_k \\ \underline{L_1, L_2, \ldots, L_r} \end{array}\right\} \textit{Explanans } S$$
> $$E \qquad \textit{Explanandum-sentence}$$
>
> Here, $C, C_2, \ldots, C_k$ are sentences describing the particular facts invoked; $L_1, L_2, \ldots, L_r$ are the general laws on which the explanation rests. Jointly these sentences will be said to form the *explanans S* . . . The conclusion E of the argument is a sentence describing the explanandum-phenomenon . . . Thus a D-N explanation answer the question "*Why* did the explanandum-phenomenon occur?" by showing that the phenomenon resulted from certain particular circumstances, specified in $C, C_2, \ldots, C_k$, in accordance with the laws $L_1, L_2, \ldots, L_r$. By pointing this out, the argument shows that, given the particular circumstances and the laws in question, the occurrence of the phenomenon *was to be expected*; and it is in this sense that the explanation enables us to *understand why* the phenomenon occurred. In a D-N explanation, then, the explanandum is a logical consequent of the explanans. (336-7)

Thus Hempel proposes that arguments and explanations are not mutually exclusive categories, but in fact, that explanatory arguments (explanations) are a subset of arguments. The purpose, by which Kelley and Govier would have us decide if a passage is an argument or an explanation, is unclear in the case of

explanatory arguments. Thus we can begin to see the difficulty in proposing a division between arguments and explanations, as is done by Govier and Kelley.

1.5 Explaining and Arguing against Ryle

As I previously discussed, the contemporary logic texts support my position that 'therefore' may indicate either an argument or an explanation, and that 'because' may also indicate either an argument or an explanation. However, this is not an uncontroversial claim. For instance, Gilbert Ryle strongly disagrees with the claim that 'because' can indicate either an argument or an explanation. In his paper, "'If,' 'So,' and 'Because,'" Ryle proposes a categorization of three different, yet closely related, types of statements. He claims that 'if . . . then . . .'-statements, '. . . 'therefore . . . '-statements, and '. . . because . . .'-statements "are different . . . and yet are closely related . . ." ("'If,' 'So,' and 'Because,'" 324) He claims that 'therefore'-statements are *usually* arguments, thus allowing that sometimes they may be explanations, but he claims that 'because'-statements are *always* explanations, which is contrary to the contemporary claim, and my belief, that 'therefore' can indicate either an argument or an explanation, and that 'because' may also indicate either an argument or an explanation.

In making the claim that 'therefore' usually indicates an argument and 'because always indicates an explanation, Ryle is supporting the division between

arguments and explanations. As we earlier noted W. Salmon remarked that most of the work done on explanation since Hempel's article, has been in response to Hempel's position. W. Salmon writes that the story of scientific explanation "begins in 1948 with the publication of the above-mentioned classic article, "Studies in the Logic of Explanation," by Hempel and Oppenheim. . . It is the fountainhead from which the vast bulk of subsequent philosophical work on scientific explanation has flowed – directly or indirectly." (8) W. Salmon goes on to say that "during the first decade after its appearance it had rather little influence on philosophical discussion of explanation," and he claims that only one major article critical essay appeared during this time (by Scheffler, 1957). (9) However, I think it is possible that Ryle's article "'If,' 'So,' and 'Because,'" should be considered as a response, at least in part, to Hempel. For, given that Ryle was discussing explanation, it is unlikely that Ryle was unaware of Hempel's work on the subject. If my suggestion is correct, then Ryle's comments such as "Explanations are not arguments," are directed at Hempel's account of explanatory arguments. (Ryle, "'If,' 'So,' and 'Because,'" 330) If I am right, then with his article, Ryle accuses Hempel of making a category mistake with regard to explanations, and the materials with which one might construct explanations, namely, arguments.

Ryle first distinguishes 'therefore'-statements from 'if . . . then . . .'-statements and 'because'-statements. He considers the statements, "Today is Monday,

therefore tomorrow is Tuesday," "If today is Monday, then tomorrow is Tuesday," and "Tomorrow is Tuesday because today is Monday."[6] He claims that "'therefore'-statements, such as "Today is Monday, therefore tomorrow is Tuesday," are usually arguments, of which it does not make sense to ask whether they are true or false, but instead we must ask, whether they are valid or fallacious. ("'If,' 'So,' and 'Because,'" 324) Ryle writes,

> We can, indeed, ask whether [an argument's] premises are true, and whether its conclusion is true; but there is not the third question "Is it true that today is Monday so [therefore] tomorrow is Tuesday?" An argument is not the expression of a proposition . . . ("'If,' 'So,' and 'Because,'" 324)

Thus he formulates a practical test to determine if an expression is in fact an argument: can one create a question from the unaltered proposition? Ryle notes that we can shift the verb and replace the period with a question mark in 'because'-statements (explanations), while we cannot sensibly do the same for 'therefore'-statements (arguments); we can ask, "Is the reason why [you say/think] it is Tuesday tomorrow because it is Monday today?" whereas he claims, "there is no way of producing a question out of 'Today is Monday, so [therefore] tomorrow is Tuesday.'" ("'If,' 'So,' and 'Because,'" 324)

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[6] Given that my interest at this point is only to show that 'therefore' and 'because' can indicate both explanations are arguments, and thus I am not yet interested in discussing the role of 'if . . . then . . .'-statements, I will at this point only focus on Ryle's position on explanations and arguments. Later I will introduce and address the issue of hypothetical conditionals and their relationship to 'because,' and thus I will put off further discussion of 'if . . . then . . .'-statements until that time. (discussion starts on page 28 of this paper)

I think Ryle's question-making requirement misinterprets these 'because'-statements and therefore'-statements. He is begging the question by considering the 'therefore'-version as an argument, and the 'because'-version as an explanation. As we did with M. Salmon's examples, let us attempt to make a 'therefore'-argument, 'therefore'-explanation, a 'because'-argument, and a 'because'-explanation out of Ryle's example.

The obvious interpretation, in fact the interpretation Ryle is counting on, is of "Today is Monday, therefore tomorrow is Tuesday," as an argument. Ryle proposes that *most commonly*, 'therefore' indicates an argument while 'because' *always* indicates an explanation. Thus he suggests the possibility of 'therefore' indicating an explanation. He does not allow though that a 'because'-statement could ever be anything but an explanation; he does not think 'because'-statements can be arguments. However, imagine that Mrs. Brown is explaining to her husband, who mistakenly claims that tomorrow is Wednesday, why she believes that tomorrow is Tuesday. She might say, in a patronizing tone, "Well *today* is Monday, therefore *tomorrow* is Tuesday. Any questions?" to which Mr. Brown replies, "Oh! (checks his day-timer) I was thinking to*day* was Tuesday. Silly me! Of course, you are right – tomorrow is Tuesday." I think we can agree that in this case Ryle's 'therefore'-"argument," is really an explanation, and not an argument at all as the one person is explaining to the second why (she believes) tomorrow is Tuesday. Or, in an even more basic example of

explanation, imagine little Joey, who questions everything. Little Joey is told that tomorrow is Tuesday, so he asks, "Why is tomorrow Tuesday?" His mom's answer would likely be, "Today is *Monday*, therefore, tomorrow is *Tuesday*." This is to say, she is explaining that tomorrow is Tuesday because, by definition, the day following Monday (today) is Tuesday, thus, tomorrow is Tuesday. Both examples demonstrate that 'therefore'-statements may be explanations.

Furthermore, I think we can conceive of situations in which, "Because today is Monday, tomorrow is Tuesday," would be understood as an argument, despite Ryle's claim that 'because'-statements are always explanations. I believe the strength of Ryle's claim that "Because today is Monday, tomorrow is Tuesday," is an explanation rather than an argument is based on the fact that as an argument, 'because'-arguments are abbreviations. This is to say that they include one or more assumed premises, so they do not resemble a formal argument. I do not believe this is problematic for 'because'-arguments as 'therefore'-arguments also frequently assume premises.

Moreover, I think Ryle ignores the possibility that the boundaries of arguments and explanations may overlap; an explanation may be given by means of an argument, and arguments may be an explanation of why someone believes what they do. Kelley did suggest that the division between argument and explanation is controversial and complex. Although Kelley and Govier agree to base the

division between arguments and explanations on their purpose, some other accounts realize the complexity and controversy of this division. As we have discussed, Hempel famously claimed that some explanations are given by means of arguments, namely explanatory arguments. Thus he provides us with an account of argument and explanation which blurs the categorization described by Kelley and Govier, and which is assumed by Ryle,

For instance, the previous example, of one person explaining to another why she believes tomorrow is Tuesday, is an explanation *by means of* an argument. Although she is explaining why she believes that tomorrow is Tuesday, and thus the statement is an explanation, I believe she is at the same time arguing her case. Mrs. Brown is offering an abbreviated argument as to why she believes what she does, in the hopes of converting her husband to her way of thinking. We can understand this argument as follows: "Because today is Monday, (and Tuesday follows Monday) tomorrow is Tuesday." Almost everyone is familiar with the order of the days of the week, and thus it is not an unreasonable for the speaker to omit the middle statement, as she can assume that the listener already knows it – she is assuming that the confusion over what day it is tomorrow is based not on the order of the days, but rather on what day it is currently. Thus for the sake of emphasis and clarity, she abbreviates her argument.

Conversely, an explanation may be given by means of an argument. For example, Govier provides an example with which she attempts to demonstrate a case of someone merely explaining that they hold beliefs, rather than arguing why they hold those beliefs:

> His parents had been fundamentalist Christians, and his religious education was a strong feature in his character. The church had always emphasized social concern. Thus he accepted the Bible as a basis for action to relieve the suffering of the poor. (10)

However, this seems to obviously be an example *not* of "someone merely explaining *that* they hold beliefs," but rather it is an example of someone attempting to justify *why* they hold their beliefs.

Argument	
Premise (1)	His parents are fundamentalist Christians.
Premise (2)	His religious education was a strong feature of his character.
Premise (3)	The church always emphasized social concern.
Premise (assumed)	(If he was of Christian heritage, education and character, then he is a member of the church.)
Premise (assumed)	(If he was of Christian heritage, education and character, then he will accept the Bible as a basis of action.)
Premise (assumed)	(Relieving the suffering of the poor is a social concern.)
Conclusion	Thus, he accepted the Bible as a basis for action to relieve the suffering of the poor.

By including three premises which I believe can easily be judged as obvious and assumed by the speaker's audience, we see that the passage fits the Govier's model for an argument. Reformatted according to her model, we can see that this passage is used not, as Govier holds, to *merely* explain that "he accepted the

Bible as a basis for action . . ." rather, the speaker is explaining *and* justifying the belief that "he accepted the Bible as a basis for action . . ." What is being argued for should not be confused; the above passage is *not* being used as an argument for the conclusion "The Bible is/should be a basis for action to relieve the suffering of the poor," but it is an argument, albeit abbreviated, for the conclusion, "He accepted the Bible as a basis for action to relieve the suffering of the poor."

Ryle describes what he sees as an important difference between 'therefore'-statements and 'because'-statements, as arguments and explanations, respectively. He writes,

> The conclusion of one argument may be the premise of another argument, but an argument itself cannot be the premise or conclusion of an argument . . . 'because'-statements, on the other hand, can be premises and conclusions in arguments." ("'If,' 'So,' and 'Because,'" 326)

Ryle is hereby claiming that just as an argument cannot function as the conclusion of an argument *and*, at the same time, function as a complete argument, an explanation cannot function as the conclusion of an argument *and*, at the same time, function as a complete argument because an explanation is only a premise or a conclusion of an argument.

I believe this objection can be overcome by again referring to our tendency to abbreviate our arguments and explanations for the sake of brevity and emphasis.

Thus I respond to Ryle by saying that due to pragmatic factors, arguments and explanations vary in their completeness from those abbreviated to the point of merely providing a statement of conclusion, to nearly complete arguments and explanations which state a number of contributing premises in addition to the eventual conclusion. In this way, Ryle's distinction between arguments and explanations becomes blurred. By my account, an (abbreviated) argument may be given by merely stating a single premise in conjunction with the conclusion, and thus the 'therefore'-statement or 'because'-statement may function at the same time as both the conclusion, and the argument which supports the conclusion. For example, Karen tells a co-worker who is looking for Jenny, "I bet she went home early, because she wasn't feeling well." Karen is really giving an abbreviated argument to support her conclusion that Jenny went home early. The full argument would read something like, "Because Jenny wasn't feeling well this morning, and people who are not feeling well often go home, therefore I conclude that Jenny went home early." Similarly, an (abbreviated) explanation may be given by merely stating the contributing factors, and thus the 'therefore'-statement or 'because'-statement may function at the same time as both the relevant explanans, and an assumed explanandum. Imagine Jenny told Karen that she was going home to bed because she was feeling ill. Then when their co-worker notices Jenny's desk is empty and asks Karen why Jenny isn't there. Karen might simply answer, "Jenny is sick." In this way, "Jenny is sick" is an abbreviated explanation, where a fuller explanation would be something like,

"Jenny is not at her desk because she is sick, and sick people go home." So Karen is merely giving the most relevant part of the explanation to her co-worker with the expectation that he can work out the rest of it himself.

Now that I have explained what I believe to be the mistakes leading to Ryle's conclusion that 'therefore' only indicates arguments while 'because' only indicates explanations, I wish to address his comments regarding the relationship between hypothetical conditionals and 'therefore'-statements. Moreover, I will revise his remarks on the relationship between 'therefore' and hypothetical conditionals to apply as well to 'because' and hypothetical conditionals. Once we realize that a statement, 'X,' is merely an abbreviated argument or explanation, we can evaluate whether or not 'X' is a complete argument. If we find that 'X' is abbreviated, we should be able to construct the complete, unabbreviated, argument or explanation, 'X_1' by filling in the assumed premises or contributing factors.[7] Ryle seems to reject this last claim, that arguments and explanations may include assumed statements, with three separate sets of comments.

First Ryle writes:

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[7] If we cannot do so, the speaker has erred in his effort to supply his audience with the appropriate answer by means of providing the relevant factors as an argument or explanation. In this case, the audience must ask the question again in such as way as to procure the piece of the puzzle, the factor in the argument or explanation which they are missing.

> It might be erroneously suggested that an argument requires the truth of the corresponding hypothetical statement . . . that the hypothetical statement follows from or is entailed by the argument . . . Certainly, "If today is Monday, tomorrow is Tuesday," follows from the statement, "The argument, 'Today is Monday, so tomorrow is Tuesday' is a valid one"; but it neither does nor does not follow from the argument "Today is Monday, so tomorrow is Tuesday." ("'If,' 'So,' and 'Because,'" 326-7)

Thus by allowing that "If today is Monday, tomorrow is Tuesday," follows from the statement, "The argument, 'Today is Monday, so tomorrow is Tuesday' is a valid one" I think we may allow that "If today is Monday, tomorrow is Tuesday," implicitly follows from our making the statement, "Today is Monday, so tomorrow is Tuesday." If we state "'A' therefore 'B'" then at base we are stating a causal relationship between A and B, specifically that A is the cause of, or reason for believing B.[8] We can format this causal relationship in terms of a conditional statement, "If 'A' then 'B.'" I claim that all 'therefore' and 'because'-conclusions can be considered to include a conditional statement, and the affirmation of the antecedent of that conditional statement. Whether true or false, if Robert draws the conclusion, "I killed a spider today, therefore it will rain tomorrow," he is really making two implicit statements: 1/ "If I kill a spider today, it will rain tomorrow," and 2/"I killed a spider today."

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[8] There are exceptions to this, where we are not actually stating that A is the *cause* of B. In the example, "Today is Monday, therefore tomorrow is Tuesday," that today is Monday is not the *cause* of tomorrow being Tuesday. Similarly, in the example "Socrates is a man, therefore he is mortal," Socrates' mortality is not *caused* by his being a man. In these cases, A does not cause B, rather A is the reason why we believe B. Thus the wording would be something more like "By definition, A entails B." However, the precise wording here is not our main concern, but rather the fact that in all arguments, if we conclude "A therefore B," we can assume "If A, then B." We can see that hold in the Monday example and the Socrates example, as we assume the truth of the conditional statements, "If today is Monday, then tomorrow is Tuesday" and "If Socrates is a man, then Socrates is mortal," from the pervious conclusions, "Today is Monday therefore tomorrow is Tuesday" and "Socrates is a man, therefore Socrates is mortal," respectively.

Next Ryle remarks:

> It might erroneously be suggested that an argument "*p, so q*" is nothing more or less than a stylistically veiled conjunctive statement, the candid expression of which would be "*p, and (if p, then q) and q*" . . . For conjunctive statements are true or false statements, not valid or invalid arguments. (Ryle, "'If,' 'So,' and 'Because,'" 327)

Since I am arguing that 'therefore' and 'because' are functionally equivalent, I will also address the corresponding Rylean criticism of 'because:'

> It might erroneously be suggested that an argument "*q, because p*" is nothing more or less than a stylistically veiled conjunctive statement, the candid expression of which would be "p, and (if p, then q) and q" . . . For conjunctive statements are true or false statements, not valid or invalid arguments.

To this charge, I would answer that although in Chapter Two I claim that the discourse connectives function as "'and'-plus," I do not believe that either 'therefore' or 'because' should be considered merely as a conjunction. As Ryle correctly notes, an argument cannot be judged not valid or invalid if it is only an extended statement of conjunctions. In the next chapter I will propose that arguments are indeed to be evaluated as valid or invalid and this evaluation is possible because of the meta-linguistic tacit performative, 'I suggest Y is the conclusion of an argument.' Therefore both 'therefore' and 'because' invoke entailment, rather than a conjunction or a hypothetical statement as their primary function.

Finally, Ryle suggests another mistaken conception of the relation between conditional statements and 'therefore'-statements:

> An argument "*p, so q*" is always invalid unless the premise from which '*q*' is drawn incorporates not only "*p*" but also "*if p, then q.*" "*q*" follows neither from "*if p, then q*" by itself nor from "*p*" by itself, but only from the conjunction "*p and (if p, then q).*" But this notoriously will not do. (Ryle, "'If,' 'So,' and 'Because,'" 327-8)

Again, I will also address the corresponding Rylean remarks about 'because.'[9]

> An (explanatory) argument "*q, because p*" is always invalid unless the premise from which '*q*' is drawn incorporates not only "*p*" but also "*if p, then q.*" "*q*" follows neither from "*if p, then q*" by itself nor from "*p*" by itself, but only from the conjunction "*p and (if p, then q).*" But this notoriously will not do.

This type of argument is "notorious" because of Lewis Carroll's article, "What the Tortoise Said to Achilles." To summarize, the Tortoise teaches Achilles that it is not enough to have an axiom, or rule, but one must then have a rule to govern the application of the initial rule, but, of course, one must then have a rule governing the application of the meta-rule, and then a further rule to govern the application of the meta-meta rule, and so on, and so on. (Carroll, 1104-1108) Similarly Ryle claims "q" cannot merely follow from the conjunction of "p" and "(if p, then q)." "this notoriously will not do" because of an argument similar to the one presented to us by Carroll's Tortoise: "q" cannot merely follow from "p" and "if p then q" because that would lead to an unending chain of justification; we would need to explain that "q" follows from "p" and "if p then q" because "if

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[9] As I will later discuss, Ryle himself remarks on the similarities between 'because' and 'therefore' with regard to hypothetical statements. ("'If,' 'So,' and 'Because,'", 330-331)

p and (if p then q) then q" which in turn would need to be supported by "if p and (if p and (if p then q)) then q" and so on. Thus Ryle notes, "The principle of an inference cannot be one of its premises or part of its premises," as doing so leads to a never-ending ladder of justification (329). In this way, including the principle of an inference as a premise results in the impossibility of justifying the conclusion.

Ryle addresses this problem himself, and I agree with his account. He says that 'therefore'-statements (and thus I add 'because'-statements) are applications of hypothetical statements. He compares this relation to that of having a train ticket: knowing a hypothetical statement, and actually making the train trip, cashing in your hypothetical statement to get you were you want to go, the 'therefore'-statement or the 'because'-statement. He adds, that "knowing a variable hypothetical or 'law' is like having a season ticket." (Ryle, "'If,' 'So,' and 'Because,'" 329) In this way, one use's hypothetical statement 'ticket' gets you to the conclusion 'station' but the 'ticket' is not itself the 'trip' (the argument) or the 'station,' nor the 'station' the 'ticket' or the 'trip.' Thus he considers a hypothetical statement to be an inference warrant, and a 'therefore'-statement, the actual inference.

Other than including 'because'-statements as the alternative form of stating a conclusion, namely as an inference, I agree with Ryle's account. Continuing

Ryle's analogy, I would suggest that a ticket-master, who has frequently seen a particular gentleman flash his season ticket, after a while begins to wave the gentleman through without any further glances at the season's ticket his experience has established is already in this man's possession, and the man recognizes this and stops showing his ticket when he boards the train. Therefore the ticket itself becomes assumed by the ticket-master and the passenger, and thus irrelevant to the man's trip, just as after sufficient knowledge and experience, a speaker and an audience no longer desire to look at the 'season ticket,' the scientific law. In this way, not checking tickets is like assuming knowledge of scientific laws, or other well-known premises. Boarding a train without showing your ticket, or giving an argument or explanation where you assume laws, or other general knowledge, does not mean that the argument or explanations holds in its abbreviated form, or that the conclusion or explanandum follows from the abbreviated version. As I will discuss in the next chapter though, the indicator words instead carry an implication, and thus the arguments and explanations hold because of implied conventional implicatures. Boarding a train without showing your ticket, and/or assuming parts of an argument or explanation, are both permissible because of conventional implicature. How and why this is, I will not discuss now, but will return to in Chapter Two.

Now let us consider Ryle's overall account of the relationship between 'because'-statements and hypothetical statements and 'therefore'-statements and see what progress we have made. Against Ryle, I have argued that since 'therefore'-statements and 'because'-statements are functionally-equivalent, the relation between 'because'-statements and hypothetical statements will parallel that between 'therefore'-statements and hypothetical statements.

Let us consider a summary of Ryle's position. About 'because,' 'if . . . then . . .' and 'therefore' Ryle writes,

> Now the statement "*q, because p*" cannot be true unless "*q*" and "*p*" are true. It also cannot be true unless "*if p, then q*" is true. In these respects, that it requires the truth of "*p*," "*q*," and "*if p, then q*," it has obvious analogies to the argument "*p, so q*." But the sense of "requires" is different since explanations are true or false, not valid or invalid, while arguments are valid or invalid, but not true or false. (Ryle, "'If,' 'So,' and 'Because,'" 329)

We have already argued that 'because'-statements may be either arguments or explanations. 'Because'-statements, like 'therefore'-statements, can only be evaluated as valid or invalid arguments when we consider the complete argument, which is represented by the abbreviated argument, which is what is usually stated in 'therefore-statements and 'because'-statements. Thus Ryle is wrong when he says that the sense of 'requires' is different. The sense of 'requires' is identical for 'therefore'- and 'because'-arguments and 'therefore'- and 'because'-explanations. As arguments which conclude "'A' therefore 'B'" or "'B' because 'A,'" the truth of "If 'A' then 'B'" is required and thus may be

assumed. Explanations which reason "'A' therefore 'B'" or "'B' because 'A,'" the truth of "If 'A' then 'B'" must be assumed for the explanation to make sense, and to hold. It would be absurd to believe and offer an explanation "'A' therefore 'B'" or "'B' because 'A,'" while also believing and stating "But not "If A, then B." It would be ridiculous to sincerely say, "Mike died because he had lung cancer, but I don't' believe that lung cancer causes death."[10] Thus if the explanation is to be true, then the truth of "If 'A' then 'B'" is required.

Ryle continues,

> If a person accepts "*p, so q*" as not only valid but also correct, in the sense that both its premise and conclusion are true and that the argument from the one to the other is legitimate, then he is committed to accepting "*q, because p*" as true, and vice versa; yet "*q, because p*" is not a paraphrase of "*p so q*" anymore than surrendering one's ticket to the ticket collector at one's destination is making a legitimate train journey. (Ryle, "'If,' 'So,' and 'Because,'" 329)

Here we see Ryle reiterate his mistake: Ryle incorrectly declares that 'because'-statements are the conclusions of arguments, the final destination of the trip/argument. However, I maintain that 'because'-statements, like 'therefore'-statements are the statement of an abbreviated argument. By Ryle's analogy, the abbreviated argument stated by a 'therefore'-statement or 'because'-statement allows the passenger to nap along the way, skipping the boring parts of the trip, and noting only the points of interest, before arriving at his final destination, the

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[10] The only way this could be said without it being absurd is with the implication of some suspicion that Mike did not *really* die of lung cancer, but was in fact murdered, misdiagnosed, etc.

conclusion of the argument. This is to say, when presenting an argument, the speaker may choose to only explicitly state the "points of interest," namely the most relevant premises, not *all* the premises.

Ryle considers and rejects two proposals for understanding 'because.' First he writes:

> But nor is ["*q, because p*"] to say "*p, and q, and (p so q).*" For, "*p, so q,*" not being a statement, cannot be a component of a conjunctive statement. (329)

Although 'therefore' and 'because' perform both the function of a connective and an indicator of entailment, the primary function is pragmatic, to indicate entailment, and only incidentally, that is grammatically, do these words act as a connective. Thus Ryle's claim that "p, so q" is not a statement, and therefore cannot be a component of a conjunctive statement, is merely a semantic debate, which should be overlooked in favour of a consideration of the general spirit with which we are to understand these words. Moreover, it is only by Ryle's imposed division between 'therefore,' because' and 'if . . . then . . ." which he ties to his exclusive definitions of 'arguments,' 'explanation-statements,' and 'hypothetical statements,' that 'therefore'-*arguments* are to be considered as arguments and not as statements. Ryle seems to beg the question with his own premises/claims: 1/ 'therefore'-"statements" are arguments, 2/ arguments are not statements, and thus 3/ 'therefore'-arguments cannot be statements.

Ryle continues,

> Nor is "*q, because p*" equivalent to "*p, and (if p, then q) and q*"; for a person who said this would not have given the explanation of "*q*" though he would have provided material out of which such an explanation could be constructed. (Ryle, "'If,' 'So,' and 'Because,'" (329)

Here Ryle admits that the speaker "would have provided material out of which such an explanation could be constructed," and by our account of explanation, this is all that is necessary to say that an explanation has been given. We have already discussed that often, probably more often than not, explanations are abbreviated to merely the most relevant premises, this is to say, the explanation provides just enough information for the listener to be able to understand the assumed, implicit, complete explanation. Thus by allowing that the listener could construct an explanation out of the material provided by "q, because p," Ryle is allowing, by our definition of abbreviated explanations, that 'q, because p' is in fact an explanation.

While I may wish to agree with Ryle's that 'therefore' "most commonly" indicates an argument, and I may even concede that 'because' most commonly indicates an explanation, I disagree with his claim that 'because' *always* indicates an explanation. If both words may perform both acts, the frequency with which each word indicates what, is irrelevant to our discussion. The frequency for which each term is used is rendered irrelevant by the unpredictability with which either usage may occur; the listener must determine which use is being

employed, argument-indicator or explanation-indicator, for each individual occurrence. As I will discuss later, this determination is made based on context, and not on a frequency-based assumption.

1.6 Conclusion

I have claimed that arguments may be indicated by both 'therefore' and 'because' and that explanations may be indicated by both 'therefore' and 'because. In Section 1.2, I demonstrated that both 'therefore' and 'because' may indicate an argument. In Section 1.3, I demonstrated that 'therefore' and 'because' may also indicate an explanation. In Section 1.4 I discuss the lack of acknowledgement paid by contemporary logic texts to their conflict with the established position, Hempel's account of explanatory arguments. In Section 1.5, I suggest that Ryle may be addressing Hempel with his account of arguments, explanations and conditional statements. However, primarily I am concerned with responding to my personal conflict with Ryle's theory of 'therefore' and 'because.' I address Ryle's arguments and I argue that providing the materials (arguments) by which an audience can construct an explanation, and giving an audience a fleshed-out explanation (and unabbreviated explanatory argument), in practice, conclude with the same results – both methods result in the same understanding of the explanation.

I will now proceed on the basis of my claim that 'therefore' and 'because' may both indicate either an argument or an explanation. By examining some examples of both arguments and explanations, I believe it is clear that arguments may be indicated by either 'therefore' or 'because' and that explanations may be indicated by either 'therefore' or 'because.' In other words, 'therefore' may indicate either an argument or an explanation and that 'because' may indicate either an argument or an explanation. Thus 'therefore' and 'because' share the same two functions, which makes them functionally-equivalent.

Given the demonstrated similarity between 'therefore' and 'because,' I propose that we may apply a theory of meaning for 'therefore' to 'because.' Steven Rieber has provided us with an account of the meaning of 'therefore' which I believe is almost accurate. After making a few amendments to Rieber's theory of 'therefore,' I shall apply my modified-Rieberian theory of 'therefore' to 'because.' In this way, I create a modified-Rieberian theory of meaning for 'because.'

Chapter Two:
Rieber's Theory of 'Therefore' and a Rieberian Theory of 'Because'

2.1 Introduction

I shall now explain and discuss Rieber's article "Conventional Implicatures as Tacit Performatives." The question addressed by his article is, "How do discourse connectives communicate what they do? More generally, how is it possible for an expression to have a conventional, non truth-conditional meaning?" (Rieber, 52) I will first discuss Rieber's argument that discourse connectives carry conventional implicatures, which can be best understood as tacit performatives. I will briefly explain what Rieber means by 'discourse connective' and discuss the underlying theories of implicature and performatives. I shall then show how Rieber applies both these theories to account for the meaning of discourse connectives.

In the next section, I will specifically focus on his account of 'therefore.' I will briefly review Grice and Rieber's theories as applied to 'therefore.' In the following section, I will explain why I believe their approaches are flawed, which is primarily that their accounts are missing an important step. I will suggest a modification, the missing step, to Rieber's theory. With the functional equivalence of 'therefore' and 'because' established in the previous chapter, in

the third section of this chapter, I will apply my modified-Rieberian theory to 'because' and so account for the meaning of 'because.'

I believe that a Rieberian understanding of 'because' allows us to demystify 'because' by eliminating the direct referent to causation. With my modified-Rieberian theory of 'because,' we can understand 'because' as a linguistic tool, which function similar to 'therefore,' as an indicator of either an argument or an explanation. In this way, we can derive the meaning of 'because' as we do for 'therefore,' from its use, and not its referent.

2.2 Rieber's Account of Discourse Connectives

Rieber's article focuses on a category of words he calls 'discourse connectives." By this he means words which connect complete sentences. The examples he gives are 'therefore,' 'but', 'moreover,' 'although,' 'hence,' nevertheless,' and 'yet.' He writes, "The analysis I will propose applies to discourse connectives, as well as 'even' and 'still.' For simplicity I will refer to all of these expressions under the heading 'discourse connectives.'" (51) Thus in addition to true discourse connectives, he believes his account also applies to the words 'even' and 'still.' Following his example, for the purposes of this paper, I will also include 'even' and 'still' under the label 'discourse connectives.'

Of discourse connectives, Rieber says, "It is generally agreed that in using one of these terms the speaker suggests or implies something without actually saying it." (Rieber, 51) Simply put, they function as "'and' plus." (Rieber, 58) They conjoin statements as 'and' does, but they suggest or imply something more. Rieber sets himself the task of explaining how discourse connectives add the "something more." He does this by referring to two linguistic features, Grice's implicatures and Austin's performatives, and describing how they apply to discourse connectives.

Grice addressed the meaning of 'therefore' in his article, "Logic and Conversation." Even though Grice does not explicitly mention Ryle, it seems as though Grice wrote it in response to Gilbert Ryle's article, "'If', 'So,' and 'Because.'" Grice was a student of Ryle's and thus it is unlikely that Grice was unaware of Ryle's views, and/or unaware of this particular article. Therefore, despite there being no reference to Ryle in Grice's article, more than likely, "Logic and Conversation" was either directly, or indirectly, inspired and influenced by Ryle's work.

Although I have discussed Ryle's article in the previous chapter, I would now like to just briefly review his views about 'therefore.' [11] Ryle begins by

[11] Again, I am considering 'so' and 'therefore' to be interchangeable, as Ryle himself does in his article. (323)

differentiating between 'if-then'-sentences, 'therefore'-arguments, and 'because'-statements. He writes that 'therefore'-arguments are not statements; they are arguments, and thus like all arguments, it is sensible to ask only if the 'therefore'-argument is valid and/or sound, but not if it is true. (324) Thus while it makes sense to ask why a speaker knows, believes, or merely supposes the truth of a statement, or to ask what follows from a statement, Ryle writes, "when he [the speaker] produces an argument, none of these responses is appropriate . . . Nothing follows from "p, so q," nor does "p, so q," follow from anything." (325) Since it is an argument, Ryle does not believe anything can follow from a 'therefore'-argument.

Grice disagrees with Ryle's position, and Grice uses his theory of implicature to explain the meaning of 'therefore' – it indicates a conclusion, which follows from the previous premise, or set of premises. Grice uses the example, "Bill is a philosopher and he is, therefore, brave." (120) Grice writes that what is being said, in a loose sense, is "'Bill is occupationally engaged in philosophical studies' and 'Bill is courageous' *and* 'That Bill is courageous follows from his being occupationally engaged in philosophical studies.'" (120) We can divide what is said, in a loose sense, into what is stated and what is implied. "Bill is a philosopher," and "Bill is brave" are stated in the original proposition, and "That Bill is courageous follows from his being occupationally engaged in philosophical studies," is merely implied. Grice is thus saying that 'therefore'

implies 'this follows from that.' Furthermore, at a meta-linguistic level, Grice is also taking 'therefore' to say, "I think this follows from that, *and so should you.*" This last point is more easily addressed at a later point in this chapter, so I will return to it then.

Rieber's theory of discourse connectives echoes Grice's account of 'therefore,' in that he claims all discourse connectives carry a conventional implicature. However, Rieber's account of the conventional implicatures of discourse connectives goes beyond Grice's account with the help of an additional linguistic theory. Rieber writes that the "plus," that is the conventional implicature, is a parenthetical performative. Thus let us briefly discuss John Austin's theory of performatives before we explain the specific performatives Rieber proposes for each of the discourse connectives.

Austin claims that performative utterances are neither true nor false in and of themselves; moreover, performatives are statements which *do* something, in addition to merely *saying* something (How to Do Things With Words, 12). Austin's examples are the statements, "I do," "I name . . ." "I bequeath . . ." and "I bet . . ." as they perform the acts of marrying, christening, giving and betting, respectively. (Austin, How to Do Things With Words, 5) We can see how "I do" fits the definition of an utterance which does something, marrying, in addition to merely saying something - the statement becomes true, one marries, *by* and *with*

the uttering of the statement. Austin explains that there are two kinds of performatives: explicit and implicit. The above are examples of explicitly stated performatives. An implicit performative would be saying "Shut the door!" which is the implicit version of the explicit, "I order you to shut the door!" (Austin, "Performative Utterances,"246) Austin's performatives are significant to our discussion because, as was previously mentioned, Rieber uses the notion of performative in his account of the meaning of 'therefore.'[12]

Rieber's account of discourse connectives combines Grice's theory of conventional implicature with Austin's theory of performatives. Rieber extends Grice's notion of implicature from merely a relation between sentences, to also include a relation between sentences and speech acts. Instead of a word or sentence merely implying another sentence, Rieber claims discourse connectives imply speech acts. Specifically, Rieber states that discourse connectives are

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[12] This is not to say that Rieber thinks 'therefore'-statements are neither true nor false because they contain a performative element. Rather, the performative element is neither true nor false, but that which is directly stated, the 'therefore'-statement itself, maybe be true or false. Let us consider the example, "Todd has a big presentation tomorrow; therefore he wants to get a good night's rest tonight." I agree with Austin, as I believe Rieber would, that performatives are neither true nor false. The performative "I suggest this is a consequence" in "Todd has a big presentation tomorrow; (and I suggest this is a consequence) he wants to get a good night's rest tonight," is neither true nor false. Furthermore, I would agree with Ryle, who says that 'therefore'-statements, as arguments, are neither true nor false, but are rather valid or invalid. (324) When we consider the 'therefore'-statement as an argument, or an explanation, this is to say, as more than just the conclusion or explanandum, then of course Ryle is correct. For instance, if we consider the argument, "Todd has a big presentation tomorrow, therefore he wants to get a good night's rest tonight," the 'therefore'-statement is neither true nor false, but rather valid or invalid. However, when we adjust the punctuation, so that the example reads: "Todd has a big presentation tomorrow. Therefore, he wants to get a good night's rest tonight." Then the 'therefore'-statement is merely the conclusion of the argument, and as such, it may be evaluated as either true or false based on the preceding argument.

equivalent to "'and' plus." The "plus" is a conventional implicature which is, in turn, an implicit performative. In his example statements, Rieber uses five examples of discourse connectives: 'but,' 'moreover,' 'so,' 'even,' and 'still.' Of these five discourse connectives, Rieber gives precise suggested translations.

Discourse Connective	Implied Performative	Rieber's Example Statement	Rieber's Suggested Translation
7. 'But'	(I suggest this contrasts)	Sheila is rich but she is unhappy.	Sheila is rich and (I suggest this contrasts) she is unhappy.[13]
8. 'Moreover'	(I suggest this is an additional consideration)	Barbara's research is impressive; moreover she is a gifted instructor.	Barbara's research is impressive [and] (I suggest this is an additional consideration) she is a gifted instructor.[14]
9. 'So'	(I suggest this is a consequence)	John's door is open, so he is in his office.	John's door is open, [and] (I suggest this is a consequence) he is in his office.
10. 'Even'	(I suggest this is more surprising)	The burglars even stole the carpets.	The burglars ([and] I suggest this is more surprising) stole the carpets.
11. 'Still'	(I suggest this has been the case for some time)	It's still raining.	It's ([and] I suggest this has been the case for some time) raining.

The above examples all state one or two propositions and then they imply an additional performative about the propositions.

Rieber's Example Statement	Stated Proposition (s)	Implied Proposition
7. Sheila is rich but she is unhappy.	7a. Sheila is rich. 7b. She is unhappy.	7c. being rich and being unhappy contrast.
8. Barbara's research is impressive; moreover she is a	8a. Barbara's research is impressive.	8c. being a gifted instructor is an additional consideration to

[13] As Rieber does, I will assume a single speaker for the sake of simplicity, although Rieber notes that we can also avoid the supposed difficulty of a the number of speakers, by putting the performative in the passive, "It is hereby suggested that . . ." (Rieber, 55)

[14] In this and the following suggested translations, the 'and' in the square brackets is mine. I add it to Rieber's suggestion in order to better illustrate how the discourse connective functions as an "'And' plus."

gifted instructor.	8b. She is a gifted instructor.	having impressive research.
9. John's door is open, so he is in his office.	9a. John's door is open. 9b. He is in his office.	9c. being in an office is a consequence of a door being open.
10. The burglars even stole the carpets.	10a. The burglars stole the carpets.	10b. that the carpets were stolen is surprising.
11. It's still raining.	11a. It's raining.	11b. it has been raining for some time.

By differentiating between the stated and implied propositions by means of conventional implicature, Rieber explains how implied propositions are detachable. As he says, "two truth-conditionally identical expressions such as 'and' and 'but' may have different conventional implicatures." (Rieber, 58) The two expressions, 'and' and 'but' are truth-conditionally identical, but in natural language, there is the different conventional implicature to consider. Thus even though logically, and grammatically, the two words function identically, in natural language there is a difference between them.

Unlike conversational implicature, conventional implicatures are not cancellable. We can apply the cancel-ability test to a conversational implicature, and see that it is cancellable. When a potential employer is checking a candidate's references, and is answered simply with, "Jenny has wonderful handwriting," the implicature is that there is nothing else good to say about Jenny. However, since "and I have nothing else good to say about Jenny," is merely an implied statement, we can deny it without contradiction: "Jenny has wonderful handwriting – not to say that she is not also a hardworking and intelligent

worker as well." However, Grice notes that it is "uncomfortable" to negate a conventional implicature. (46) As with the above example, one might wonder why the referent primarily cited Jenny's handwriting rather than her diligence or intelligence, when the latter are obviously much more relevant and important to the discussion. Thus adding the denial of the implicature, adding "not to say that Jenny is not also a hardworking and intelligent worker as well," makes the statement "uncomfortable." With Rieber's account, we can explain Grice's intuition, the discomfort we feel when a conventional implicature is denied. For example, let us consider the statement:

12. Kyle won the lottery; therefore, he quit his job.

It sounds strange, at best, to hear Rieber's "translation:"

13. Kyle won the lottery; (and I suggest this is a consequence) he quit his job – not that the latter is a consequence of the former.

Of course this sounds odd, or "uncomfortable," since we are directly contradicting what we have just suggested.

Rieber notes that this seems to present a problem for Grice's account of meaning. Rieber writes that since conventional implicatures cannot be easily cancelled, conventional meaning should be included in Grice's definition of what is said, rather than what is merely implied. Grice attempted to overcome this difficulty by introducing levels of meaning. Grice's original proposal stated that an Utterer says P if and only if:

> U did something X (a) by which U meant that P,
> (b) which is an occurrence of a type S which means 'P' in some linguistic system. (Grice, 88)

Grice's modified his original proposal to one by which an Utterer says P if and only if:

> U did something X (a) by which U ***centrally*** meant that P,
> (b) which is an occurrence of a type S which means 'P' in some linguistic system. (Grice, 88)

By adding the notion of centrality, Grice opened up the possibility of non-central speech acts which are still dependent on the central speech act. Conventional implicature would fall under this category of non-central speech acts. Rieber writes that Grice gave examples of the non-central speech acts involved with 'moreover, 'on the other hand,' 'so,' and 'therefore:' "Examples of such non-central speech acts are, according to Grice, *adding* in the case of 'moreover,' *contrasting* in the case of 'on the other hand,' and *explaining* in the case of 'so' and 'therefore.'[15] (59) Furthermore, Rieber notes that Grice ranked these central and non-central speech acts as lower-order and higher-order; the non-central speech acts are higher-order speech acts because they comment on the lower-order, central speech act.

Finally, Rieber adds, that,

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[15] Although in his example, he cites only explaining as the non-central speech act related to 'so' and 'therefore,' I do not think this need imply an exclusionary account; I think it is possible Grice was listing only one of two possible related non-central speech acts, the other being arguing. However, whether Grice would have agreed or not, I think it is unproblematic for us to hold that 'so' and 'therefore' have two related non-central speech acts.

> Unfortunately, Grice provides no further indication of how the range of central speech acts is to be specified; nor does he explain how, in making a conventional implicature, a speaker simultaneously performs two speech acts, or how exactly these speech acts are related. (Rieber, 60)

Rieber believes that his analysis resolves these issues. The performative analysis defines how the conventional implicature comments on the central speech act. The performative analysis both describes how the speaker simultaneously makes two separate speech acts, and by identifying the implied comment about the central speech act, the performative analysis shows how they two speech acts are related. In Rieber's examples 7-9, statements with true discourse connectives, the implied proposition implies a specific relation *between* the stated propositions.[16] In examples 10 and 11 Rieber provides us with a specific implied proposition which is *about* the stated proposition. Thus Rieber's account not only complements Grice's theory, but in as far as it resolves the issue of conventional implicatures, Rieber's account is an advancement on Grice's theory.

2.3 Grice and Rieber on 'Therefore'

Grice used the following examples which contain 'therefore,'

> 14. "He is an Englishman; he is, therefore, brave." (Grice, 25)
> 15. "Bill is a philosopher, he is, therefore, brave." (Grice, 120)

[16] Remember that Rieber has included the words 'even' and 'still' in his discussion of discourse connective. Obviously they are not really discourse connectives as they do not connect propositions. Although Rieber admits 'even' and 'still' are not technically discourse connectives, for the simplicity's sake, he refers to them under the heading of 'discourse connectives.'

Let us review what Grice had to say about these examples. He first noted that there are two different speech acts occurring in each of these statements. The first is what is said, in a strict sense, or in other words, what is actually stated. The second speech act is implication. Both the above statements imply something beyond what is merely stated.

Example	Stated Proposition	Implied Proposition
14. He is an Englishman; therefore he is brave.	14a. He is an Englishman. 14b. He is brave.	Being brave follows from being an Englishman.
15. Bill is a philosopher, he is, therefore, brave.	15a. Bill is a philosopher. 15b. He is brave.	Being brave follows from being a philosopher.

In the above examples, the implicature is created by the use of 'therefore.' Grice believes that 'therefore' has the conventional implicature of indicating that one thing follows from the other. Furthermore, 'therefore' seems to carry a meta-linguistic claim, in addition to suggesting the consequential relationship between conjuncts, "I believe (b) follows from (a)," which implies "and so should you."

Rieber's account of 'therefore' is very similar to Grice's. Rieber's example is,

16. John's door is open, therefore he is in his office.[17]

[17] Rieber's example actually uses 'so' rather than 'therefore,' but I believe in light of comments made in Chapter One, this substitution is unproblematic; it is generally accepted that 'so' is an informal version of 'therefore.' Blakemore attempts to make a distinction between 'so' and 'therefore.' ("'So' as a Constraint on Relevance," 194) However, her point is to note that 'so' has an additional meaning, not held by 'therefore;' 'so' can be used as a word indicating a conversational transition in the sense of, "So anyway, how was your day?" and "So, you spent all your money?" As this sense of 'so' is obviously not at work in Rieber's example, I think I can safely conclude that the substitution of 'therefore' for 'so' is unproblematic for my purposes.

Rieber considered three different formulations of the tacit performative he believed was carried by 'therefore.' These progressions are as follows:

17. John's door is open, he is in his office (and this is a consequence).[18]
18. John's door is open, (the following is a consequence) he is in his office.
19. John's door is open, (I suggest this is a consequence) he is in his office.

He makes the move from 17 to 18 because 17, "does not accurately reflect the logical form of the original sentences." (53) This simply means that "and this is a consequence" should be suggested mid-sentence, where 'therefore' occurs, rather than tagged on at the end of the statement as it is in 17. Rieber then revises 18 because 18 *states* a consequential relation whereas the original statement implies, *without stating* this relation. Rieber wants to explain the implication by means of a tacit performative. Thus he reaches the formulation in 19, which has the performative preface, "I suggest."

By saying that the implied relation is given by a performative, the truth of 19 is solely dependent on the stated premises, "John's door is open," and "he is in his office," and not on the implied, "I suggest John's door is open is a consequence of John being in his office." As Rieber writes,

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[18] With this example, Rieber includes the footnote: "Blakemore (1988, p.190) points out that 'so' has both an inferential sense and a causal sense. This ambiguity appears to apply to 'consequence' as well." (Rieber, 53)

> The truth of the performative, "I suggest that P" does not depend on whether P is true. Rather as J. L. Austin held, it has no truth value, or, as David Lewis and others have maintained, it is always true when appropriately uttered. In either case, the truth or falsity of ["John's door is open, (I suggest this is a consequence) he is in his office"] does not depend on whether there is a [consequential relationship between the premises]." (55)

So once again we can see how discourse connectives, and in this case 'therefore,' act truth-conditionally as "'and'-plus." For a base-level truth analysis, truth conditions are free from the implied performative.

2.4 Rieber's Mistake and My Modification

As well as this theory appears to work at first blush, I believe Rieber is missing an important step in his account of 'therefore.' Grice's version and Rieber's account both claim that the original statement has an additional meta-linguistic implication that, "I (the speaker) believe P, and so should you (the speaker's audience)" – where P expresses the causal relationship between (a) and (b). The performative thus seems to have an element of persuasive force, the "so should you"-element, which is justified only by a claim to the authority of the speaker. Thus while I believe Rieber's theory of discourse connectives is correct as it applies to the other discourse connectives, I think he is missing a step in his account of 'therefore.'

I believe we can modify Rieber's theory as it applies to 'therefore' to more correctly understand how we use 'therefore,' and what we understand it to mean. As we discussed in Chapter One, 'therefore' may be an indicator of an either an argument or an explanation. I believe 'therefore' suggests merely that the statement is an argument or an explanation. I propose this account instead of Rieber's claim that 'therefore' suggests that "(b) follows from (a)" or that "(a) is a consequent of (b)."

When we consider that 'therefore' suggests a statement is an argument or an explanation, we can by-pass, without eliminating, Rieber's suggested claim, and as we will see, the results play out to be nearly the same. By indicating the conclusion of an argument or the explanandum or an explanation, we are thus by default also indicating the premise(s) of the argument, or the explanans of an explanation. Furthermore, we are, in part, indicating the possibility of missing premises. Thus, in simple classical syllogisms such as, "Socrates is a man; All men are mortal; Therefore Socrates is mortal," that 'therefore' indicates the premises and conclusion of an argument is equivalent to Rieber's performative suggestion that the conclusion is a consequence of the premises.

However, almost all of our actual arguments and explanations are far more complicated than the Socrates-is-Mortal Example given above. Usually we are presented with arguments and explanations which are incomplete. However, we

reason that the speaker must know there are more factors contributing to the conclusion, and we realize the speaker has omitted them because he assumes them to be obvious. Hence in the vast majority of examples, 'therefore' has the conventional implicature of alerting us to missing and assumed premises in an argument or to missing and assumed contributing factors in an explanation.

Let us consider an example of an argument with missing premises:

20. Henry's ex-wife came to the party, therefore Henry will leave early.

The inclusion of 'therefore' alerts the audience that this statement is meant as an argument which predicts Henry's future behaviour, and in which "Henry's ex-wife came to the party," is the most relevant contributing factor, and "Henry will leave early," is the conclusion. Moreover, the audience realizes this is not the complete argument for as it stands, this statement does not account for Henry's early departure. So the audience combines the knowledge that the statement is intended as an argument, but since it is an incomplete argument, the audience draws the conclusion that there must be missing, assumed premises. In this case, the audience will conclude that premises such as "Henry and his ex-wife despise each other," "People who despise each other dislike interacting," and "Leaving the party means Henry will avoid interacting with his ex-wife," etc. If we were to consider this same story, but as an explanation for Henry's early departure from yesterday's party, the content of the explanation would be similar to that of the argument, only we would be reasoning from Henry's

departure to the causes for his departure, rather than from the causes of Henry's discomfort to the prediction of his departure. Thus the content is consistent, but that which is know and that which is being speculated about differ between an argument and an explanation.

I claim then, as Grice and Rieber do, that in 'therefore'-statements, two different speech acts occur: the speaker states two or more propositions, and the speaker suggests an additional something. Grice and Rieber believe what is implicated is a direct reference to a relation between the propositions. I believe however, that what is implicated is the purpose of the statement, namely to offer an argument or an explanation to account for a state of affairs.

	Complete Argument	**Abbreviated Argument**	
Premise		Stated	Assumed
Premise	Henry's ex-wife came to the party.	Henry's ex-wife came to the party.	
Premise	Henry despises his ex-wife.		Henry despises his ex-wife.
Premise	If people despise each other, then they do not like to interact.		If people despise each other, then they do not like to interact.
Premise	If Henry leaves the party, then he will not have to interact with his ex-wife		If Henry leaves the party, he will not have to interact with his ex-wife
Conclusion	Therefore, Henry will leave the party early.	Therefore, Henry will leave the	

		party early.	

In this chart, we can see how a complete argument would explain Henry's behaviour; it would list all the contributing factors which lead us to predict Henry's early departure from the party. Similarly, a complete explanation would list all the factors which we believe lead to Henry's early departure.

We noted a meta-linguistic claim emerged from Grice and Rieber's accounts of 'therefore.' From the tacit performative, "I suggest this is a consequence," came a persuasive element which seemed to imply, "I think P therefore so should you." Unfortunately Grice and Rieber are unable to account for this additional suggestion. They can only claim that this suggestion arises from the perceived purpose of offering an argument or explanation; by offering an argument or an explanation, the speaker is attempting to persuade their audience. Thus, in this way, any argument, explanation, or statement has the implicature, "I believe this and so should you."

However, I think there is more force to the "I believe P and so should you "-implication, and I believe my modification can explain the strength of this claim better than is done by the accounts given by Grice and Rieber. By my account the implicit claim, "I think P and therefore you should think P," remains, but it is now reinforced by the strength of logic. We are really saying, "I think P because

it follows from a logically valid and sound (albeit perhaps abbreviated) argument or explanation – I trust logic and so should you." I propose that we recognize that this implicit claim is an argument, with missing assumed premises: "I think P; It is rational to believe P based on the previous logically valid and sound (albeit perhaps abbreviated) argument or explanation; If you are a rational person, then you should accept the conclusion P; You are a rational person; Therefore you should believe P." Thus while Grice and Rieber have only the strength of the speaker's conviction to support the "You should believe P"-conclusion, by my account the strength of the conclusion P comes from a logically sound and valid (albeit abbreviated) argument or explanation about the rationality of trusting logic. An appeal to logic as opposed to the authority of the speaker, is another improvement of my theory of 'therefore' over Grice and Rieber's accounts.

I believe my modifications to Rieber's theory though significant, are minor. I do not feel I have altered the essence of Rieber's theory of discourse connectives by adding a step to his account of 'therefore.' Rieber provided adequacy conditions by which we should judge an analysis of discourse connectives, and my modifications do not alter Rieber's theory so much as to violate any of his requirements. Thus I believe my modifications are done within spirit and the parameters of Rieber's theory and furthermore that they are an improvement to Rieber's theory.

2.5 My Modified-Rieberian Theory of 'Because'

In Chapter One I argued that 'therefore' and 'because' could be considered functionally equivalent with regards to how they act within arguments and explanations. I demonstrated that in all instances of 'therefore'-statements, we could substitute an equivalent 'because'-statement, and vice versa. Both 'therefore' and 'because' indicate an either an argument or an explanation. With the absence of any significant difference between 'therefore' and 'because' I believe that Rieber's theory of discourse connectives, which includes 'therefore', can be expanded to include 'because.' In this section then, I will take my modified-Rieberian theory of 'therefore,' and apply this understanding to 'because.'

I have already proposed that 'therefore' should be considered as an indicator of an argument or an explanation. Then, in the pervious section of this chapter, I claimed that Rieber's theory, which states that 'therefore' carries a tacit performative which states, "I suggest (a) is a consequence of (b)," was mistaken. I claim instead that the performative that accompanies 'therefore' is merely "I suggest this is the conclusion of an argument or an explanation." My version includes the intermediate step of recognizing the speaker's intention rather than merely his conclusion. From my proposal we derive two secondary

consequences. First, when we realize that most everyday statements of argument or an explanation are abbreviated, we conclude that 'therefore' comes to have the conventional implicature of indicating the possibility of missing, assumed premises. Second, the authority behind the implied "I believe P and so should you," comes not from the speaker, but from logic. Given the functional-equivalence of 'therefore' and 'because' which was established in Chapter One, the above reasoning, if true for 'therefore,' should also hold true for 'because.'

In Chapter One, I demonstrated that the equivalence of 'therefore' and 'because' arises from their similar function, which is to indicate either an argument or an explanation. Due to this functional equivalence, I believe 'because' indicates a tacit performative which is identical to that of 'therefore.' I propose that the performative carried by both 'therefore' and 'because' is, "I suggest this is an argument or an explanation." I propose that 'therefore' has as an implicature, the performative "I suggest this is the consequence/explanandum of an argument/explanation." 'Therefore' explicitly identifies the conclusion, and implicitly identifies the (most relevant) premise(s), while 'because' will explicitly identify the (most relevant) premise(s) and implicitly identify the conclusion. Thus I propose that 'because' has the similar implicature, the performative is "I suggest these are the (most relevant) premises/explanans in an argument/explanation."

Let us consider the same example, the Henry story we used in the last section's discussion of 'therefore.' First, we will need to reformulate the example, switching from 'therefore' to 'because.'

	'Therefore'-Formulation	**'Because'-Formulation**
Premise	Henry's ex-wife came to the party,	**Because** Henry's ex-wife came to the party,
Conclusion	**therefore**, Henry will leave the party early.	Henry will leave the party early.

Now I will apply my proposed performatives for both the 'therefore'-formulation and the 'because'-formulation of the Henry story.

	'Therefore'-Formulation	**'Because'-Formulation**
Original Example	Henry's ex-wife came to the party, **therefore**, Henry will leave the party early.	**Because** Henry's ex-wife came to the party, Henry will leave the party early.
Example with Proposed Performative	Henry's ex-wife came to the party, **(I suggest the preceding is the conclusion of an argument /explanation)**, Henry will leave the party early.	Henry's ex-wife came to the party, **(I suggest the following is the most relevant premise of an argument/explanation)**, Henry will leave the party early.

These examples reaffirm the functional similarity between 'therefore' and 'because' which in turn allows us to apply the same reasoning to the 'because'-formulation. Just as we could give a complete and an abbreviated argument/explanation for the 'therefore'-formulation of the Henry story, here is the 'because'-formulation of the complete and abbreviated versions of the Henry story.

	Complete Argument/Explanation	**Abbreviated Argument/Explanation**

Premise/Explanans		Stated	Assumed
Premise/Explanans	Because Henry's ex-wife came to the party,	Because Henry's ex-wife came to the party,	
Premise/Explanans	(And) Henry despises his ex-wife,		(And) Henry despises his ex-wife,
Premise/Explanans	(And) If people despise each other, then they do not like to interact,		(And) If people despise each other, then they do not like to interact,
Premise/Explanans	(And) If Henry leaves the party, then would not have to interact with his ex-wife,		(And) If Henry leaves the party, then would not have to interact with his ex-wife,
Conclusion/Explanandum	Henry will leave the party early.	Henry will leave the party early.	

Again, we can see how the abbreviated version of the Henry Example is an argument/explanation which assumes and is thus missing, the intermediate premises.

Again, we can derive two secondary consequences from my proposed performative. First, we must again recognize that most everyday statements of arguments and explanations are abbreviated, and thus that 'because,' like

'therefore,' will carry the additional conventional implicature which indicates an argument or explanation, with the possibility of missing assumed premises, and the possibility of missing, assumed supporting arguments or explanations. Second, as with 'therefore,' the authority behind the implied "You should believe P," of the implicit "I believe P, and therefore so should you," comes not from the speaker, but from logic.

2.6 Conclusion

In this chapter, I have explained Rieber's theory for the meaning of discourse connectives, including the theories of Austin, and Grice upon which Rieber's theory is built. Furthermore, I have noted a missing step in Rieber's reasoning, and modified his theory to include this missing step. Finally, I have extended this modified theory to apply to, and thus explain, the meaning of 'because.'

A benefit of my modified Rieberian account of the meaning of 'because' is that only secondarily does my account involve causality. Causality arises only indirectly, when arguments and explanations use causal terms such as 'cause' and 'effect.' Thus while these (assumed) premises state assumed causal relations, this is much less of a direct relation, than attempting to tie the meaning of 'because' to some idea of 'cause' and thus causality.

In the next chapter, I will discuss how this pragmatic understanding of 'because' complements Bas Van Fraassen's pragmatic theory of explanation.

Chapter Three:
Explaining Explanation

3.1 Introduction

In the first chapter, we concluded that 'because' may indicate either an argument or an explanation, while in the second chapter we examined how this occurs. As an indicator of arguments and explanations, the concepts of 'argument' and 'explanation' are vital to the meaning of 'because.' As Kelley previously noted, the definitions of argument and explanation are controversial and complex. (562) Yet the concept of argument seems fairly well established in and by the history of logic. Thus the confusion must come from the concept of explanation. Whether or not 'because' *most frequently* indicates an explanation, indicating an explanation is an important part of the function of 'because.' Thus I wish to examine and clarify the idea of explanation so that we may better understand the meaning of 'because.'

Specifically I intend to ask, what are the requirements of an explanation? This is to say, what does it take for something to be considered an explanation, and furthermore, a good explanation? I will advocate the account given by Bas Van Fraassen. I will begin by explaining Van Fraassen's pragmatic theory of explanation, and then I will explain how our causally-neutral Rieberian theory of 'because' and 'therefore' can supplement Van Fraassen's theory. First, my

modified-Rieberian account of 'because' supports Van Fraassen's unsubstantiated claims that 'because indicates an answer/explanation. Secondly, given that I have established the functional equivalence of 'because' and 'therefore,' we can expand Van Fraassen's account of explanation by which answers/explanations are indicated by 'because,' to include answers/explanations which are indicated by 'therefore.'

3.2 Examining 'Explanation'

Hempel asserts only two criteria for explanations: explanatory relevance and testability. He speaks of explanations turning out to be false, and of *pseudo-explanations*, which are explanations in appearance only. As do most scientists, Hempel believes that explanations reveal a relation between facts and theories. As we discussed in Chapter One, Hempel held that scientific explanations are arguments. As such, the premises of the argument, the scientific explanation, must be true for it to be a sound argument. Thus within scientific discussion, and by Hempel's account, 'explanation' must be understood as an attempt at describing truth, however it remains debatable whether we also should hold that 'explain' and its cognates must achieve the task of actually describing the truth of a situation.

Sylvain Bromberger, who argues that explanation is an accomplishment term, makes the claim that for "P_0 explained X to P_1," P_0 must have accomplished the task of explaining X.[19] (Bromberger, 20) Furthermore, Bromberger describes the act of explaining as presenting the "right answer." (23) According to Bromberger's account, it is false that Newton explained the tides, because his theory was incorrect. In this way, Bromberger's account of explanation as an accomplishment term which includes the presentation of truth as part of what is accomplished. Thus Bromberger gives an account of explanation which is dependent on truth, on the relationship between facts and reality.

Like Bromberger, Van Fraassen also states that an explanation is an answer, but that it is a three-term relation: a relation between theory, fact, and context." (156). Specifically, he writes: "An explanation is an answer to a why-question." (Van Fraassen, 134) However, unlike Bromberger, Van Fraassen states that views which claim explanations are tied to the unknown mechanics of the world are false.

> To say that a theory explains some fact or other, is to assert a relationship between this theory and that fact, which is independent of the question whether the real world, as a whole, fits that theory. (98)

With this move, Van Fraassen removes the truth condition for theories, considered as claims about the unobservable parts of the world. He realizes that

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[19] Bromberger adds that the task of explaining does not include a condition of the audience asking for an explanation, listening to the explanation or understanding the explanation. In this way, Bromberger's notion of explanation is completely independent of an audience. (23)

part of the debate over explanation involves the truth or falsity of an explanation: does an explanation need to be true for someone to have 'explained?' Van Fraassen claims that no, truth of the explaining theory is not a requirement of an explanation. Instead, Van Fraassen proposes an anti-realist position he calls, *constructive empiricism*. He writes:

> Science aims to give us theories which are empirically adequate; and acceptance of a theory involves as belief only that it is empirically adequate... a theory is empirically adequate exactly if what it says about the observable things and events in the world, is true. (Van, Fraassen, 12)

By Van Fraassen's account, to be "empirically adequate" is merely to be able to say truthful things about the observable data, rather than to say things about the truth of the unseen mechanics of the universe. In this way, a theory is empirically adequate if it can *account* for the observable date, whether or not it correctly describes the unobservable *causes* of the observable data. According to Van Fraassen's account then, we need not hesitate to say "Newton explained the tides."[20] Van Fraassen writes,

> The word 'explain' can have its basic role in expressions of the form "fact *E* explains fact *F* relative to theory *T*... for example, "the gravitational pull of the moon explains the ebb and flow of the tides in Newton's theory." (101)

Therefore, even though Newton's theory was wrong, Van Fraassen writes that we need only understand that the statement includes a tacit reference to a theory to realize that Newton did in fact explain the ebb and flow of the tides.

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[20] It should be noted that Van Fraassen requires that a theory be accepted, although perhaps not believed, by an audience in order for an explanation to be considered successful.

At this point Van Fraassen relies upon a Gricean understanding of conversation and implicature. He notes that by asking a question, we are presupposing the facts(s) described in the question. Let us consider a simple example: if we ask, "Why is Bob in the hospital?" we are implying that "Bob is in the hospital," and thus that Bob *is*, in fact, in the hospital. Similarly, for a science-based question, such as that given by Van Fraassen in his example, "Why does the hydrogen atom emit photons with frequencies in the general Balmer series?" the participants in the conversation are to assume that hydrogen atoms *do* emit photons with frequencies in the general Balmer series. (151) Therefore, by Van Fraassen's account, a 'why'-'because' conversation is undertaken much like a conversation prefaced by "Hypothetically speaking...." In both 'why'-'because' and "Hypothetically speaking..."-prefaced conversations, we are to assume as facts the given premises, and all subsequent discussion must be understood as dependent on the assumption of those premises.

3.3 'Because' and Van Fraassen's Pragmatic Theory of Explanation

Pragmatic theories of meaning claim "meaning is use." This is to say, how we use a word determines what that word means. In the case of 'because,' what we linguistically use 'because' to do accounts for the meaning of 'because.' In other words, a pragmatic understanding of 'because' says that 'because' is a linguistic

tool, and its meaning is the use of that tool. In this way, the study of language is about more than just the words themselves; to understand language we need to study the relationship between the words and the users of the words, in this case, between 'because' and us.

The modified-Rieberian theory of 'because' is a pragmatic theory of meaning. It proposes that we use 'because' as a tool which indicates an argument or an explanation. Thus by this account, since 'because's' meaning is its use, 'because's' meaning is to indicate an argument or an explanation. I would add, that 'because' also carries the conventional implicature which results from the realization that a statement offered as an argument or an explanation is abbreviated, incomplete and thus in many cases there are missing assumed premises/explanans. Thus the conventional implicature, and therefore an addition to the meaning of 'because' is the suggestion of missing assumed premises/explanans. So I argue the modified-Rieberian theory 'because' gives 'because' a two-part meaning; according to this pragmatic theory the meaning of 'because' is "I suggest this is the result of an argument or explanation," and "If the argument/explanation is incomplete, I suggest the possibility of missing assumed premises/explanans."

Van Fraassen does not offer any account of the meaning of 'because,' although his theory of pragmatic explanation depends upon an understanding of

'because.' Van Fraassen instead seems to assume 'because''s meaning, and he offers an evaluation procedure for 'because'-statements. In fact, he seems to merely assume a theory of 'because' exists and supports his belief that 'because' indicates an answer. I will now discuss Van Fraassen's evaluation procedure so that we may see how my modified-Rieberian theory of 'because' complements Van Fraassen's pragmatic theory of explanation.

Van Fraassen says we can ask, "How good is the answer *Because A*?" To allow us to answer this question, he suggests that answers should meet two goals: he writes that an answer should eliminate other hypotheses and eliminate confusion. (125) Before we can answer a question however, we must determine exactly what is actually being asked. Specifically, Van Fraassen notes that a question selects, and an answer responds to, the implicated question from what he calls the "contrast class" of the topic. Van Fraassen gives us the example: "Why did Adam eat the apple?" This question presupposes the proposition, "Adam ate the apple," and this, the presupposed proposition, he calls the "topic" of the question. (141) He then notes, that from one stated question may arise many questions. Van Fraassen writes that from the question, "Why did Adam eat the apple?" many possible questions may arise, such as:

21. Why did *Adam* eat the apple?
22. Why did Adam *eat* the apple?
23. Why did Adam eat the *apple*?

These possible questions, he calls the contrast class.

Of the many questions, context and emphasis dictate which question is actually being asked, and thus what aspect of the complete explanation is being requested as an answer. The aspect of the question emphasised by the speaker, that is to say, whether we are asking, "Why did *Adam* eat the apple?" or "Why did Adam eat the *apple*?" Respectively then, the contrast classes of the above questions are: *Adam*, as opposed, to Alex, Albert, Alice or Angelina; *eat*, as opposed to admire, buy, juggle, or throw; and *apple* as opposed to a banana, orange, mango, or watermelon. Thus when we are answering the question, "Why did Adam eat the *apple*?" we are, in part, being asked "Why didn't Adam eat a banana?" "Why didn't Adam eat a mango?" and "Why didn't Adam eat a watermelon?"

Van Fraassen makes a further distinction which he calls the "relevance relation." As Aristotle states in his account of the four causes, Van Fraassen notes, for example, that we can consider there to be many possible causes for an event. Of these many possible causes of an event, the questioner is usually requesting a specific interpretation. Van Fraassen writes, "Finally, there is the respect-in-which a reason is requested, which determines what shall count as a possible explanatory factor, the relation of explanatory relevance." (142) Examples of Van Fraassen's relevance relation for "Why did Adam eat the *apple*?" include a description of the beneficial nutrition provided by the apple to the hungry

Adam, Adam's desire to please his wife Eve, or the innate weakness of Adam when faced with the temptation of curiosity and ambition.

These three conditions, the topic, contrast class, and relevance relation, all specify the exact question that is being asked. In so far as these conditions are specified in the question, they are implied by any answer which does not contradict the conditions. Specifically, Van Fraassen says that what is claimed in question is claimed by means of presuppositions:

> A 'why'-question *presupposes* exactly three things:
> (a) its topic is true
> (b) in its contrast class, only its topic is true
> (c) at least one of the propositions that bears its relevance relations to its topic and contrast class, is also true. (Van Fraassen, 144-5)

These three presuppositions are mirrored in answers. Van Fraassen writes:

> What is claimed in answer (*)?[21] First of all, that P_k is true. Secondly, (*) claims that the other members of the contrast-class are not true. So much is surely conveyed already by the question – it does not make sense to ask why Peter rather than Paul has paresis if they both have it. Thirdly, (*) says that *A* is true. (143)

Based upon his claim that 'why'-questions carry these presuppositions, he holds that a 'because'-answer simply reflect these presuppositions.[22]

In the above passages, Van Fraassen has stated that the first three requirements of a 'because'-answer apply to the proposition offered as an answer. He writes

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[21] "Answer (*)" = a 'because'-answer. "P_k" = the topic. "*A*"= proposition given as an answer. (Van Fraassen, 143)

that these conditions are: that the 'because'-proposition cites a true proposition; that the other 'because'-propositions in the contrast class are false; and that the statement provided as an answer has a strong relevance to the motive behind the question This is to say, with respect to the following dialogue,

> "Why did Adam eat the *apple*?"
> "Because Eve told him to."

1/Adam *did* in fact eat the apple, 2/Adam *did not* eat the banana, mango, or watermelon, and that 3/there is a proposition, such as "Eve told him to," (which favours the topic and is part of the contrast class) which is relevant to the question. In fact, condition three is merely the presupposition that there *is* an answer.

These implications (or presuppositions as Van Fraassen calls them) – that the topic is true, that the other members of the topic's contrast class are false, and that there is an answer - are implied primarily by the question, and only secondarily by the answer. By asking the question in anything other than a rhetorical manner, the questioner implies that the proposition is true but that the other members of the contrast class are false and that there is an answer, a reason why. However, giving an answer, other than, "Adam *didn't* eat the apple," implies that the question was valid, and thus affirms, that the proposition is true. Furthermore, unless one replies with something along the lines of, "And he ate two bananas, three mangos and a watermelon as well!" the speaker is again

implying the denial of the other members of the contrast class, that is to say, implying that Adam did not also eat any other fruits such as a banana, a mango or a watermelon. Finally, we generally assume there is an answer to any and all 'why'-questions, whether we know the answer or not, or whether we even think it is even possible to know the answer. Therefore, even in cases such as, "Why does God let bad things happen to good people?" where, outside of a philosophy or theology class, we don't actually expect an answer, we assume that there is an answer of which we are simply unaware. Thus I agree with Van Fraassen that by posing a question, we presuppose there is an answer.

Now let us move on from the presuppositions of 'why'-questions, to Van Fraassen's evaluation procedure for 'because'-explanations. "And finally, there is that word 'because': (*) claims that *A* is a *reason*," writes Van Fraassen. (143) Van Fraassen's evaluation procedure gives us three criteria for answers, where answers are 'because'-explanations. He begins by noting that when we give an answer, we are implicitly stating that we are giving a *good* answer, specifically, *the* answer. In his terms, we expect not merely a "telling answer" – that is a possible answer which relates to the question in the correct way – but a good answer. This is to say, the good answer, is the best of the telling answers.

To evaluate an answer, offered as *the* answer, he asks whether "Because X" makes the topic more probable than do the other members of the contrast class,

whether it favours the topic to a greater extent and whether it can be made partially or wholly irrelevant by other answers that might have been given. (Van Fraassen, 146-7) This is to say that if one answers "Because Adam was hungry," one is claiming that Adam's hunger, rather than his desire to please Eve, or his curiosity of the forbidden fruit, or his ambition for absolute knowledge, is the most probable explanation for his action. I would add, since most arguments and explanations are abbreviated due to pragmatic considerations, and for emphasis, that by "most probable" we should understand Van Fraassen to mean that the 'because'-statement cites the most probable, the most important, and the most relevant factor of the complete explanation.[23]

Van Fraassen's second condition is that an answer favours the topic more than other potential answers. He gives us the example:

> For example, suppose you ask why I got up at seven o'clock this morning, and I say, 'because I was woken up by the clatter the milkman made'. In that case I have interpreted your question as asking for a sort of reason that at least includes events-leading-up-to my getting out of bed, **and my word 'because' indicates that the milkman's clatter was that sort of reason**... Contrast this with the case in which I construe your request as being specifically for a motive. In that case I would have answered, 'No reason, really. I could easily have stayed in bed for I don't particularly want to do anything today. But the milkman's clatter had woken me up, and I just got up from force of habit I suppose.' In this case I do not say 'because' for the milkman's clatter does not belong to the relevant range of events, as I understand your question. (144)

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[23] I would note that we should not limit the 'because'-statement to only one factor. If we believe our audience to be ignorant of two or more, true, topic-favouring, and relevant contributing causes, then we should provide as many as we feel are necessary. Thus an answer to, "Why did Adam eat the *apple*?" might be, "Because Eve told him to, because he was curious, and because he was desirous of the knowledge to be gained from eating the forbidden fruit."

In this example, we can consider there to be two possible interpretations of the question, "Why did Van Fraassen get up at seven o'clock this morning?" The first is a request for the incident which led him to wake up so early, and the second is an inquiry into his motivation for getting up so early. We can reformulate Van Fraassen's answers into two different 'because'-statements. 1/ "Because I was woken up by the clatter the milkman made," and 2/ "Because of force of habit, I suppose." Now we can understand his topic-favouring clause by seeing how the two answers respond, respectively, to the two different interpretations, that is to say the topics, of the two questions. By Van Fraassen's evaluation procedure, we can judge the first 'because'-explanation as a poor answer for the second interpretation of the question because it does not favour the topic of the question. Going back to the Adam example, if we compare the two telling answers "Because he was hungry," and "Because he was curious, and desirous of the knowledge to be gained by eating from the tree of knowledge," the latter obviously favours the topic more than the former.[24]

Finally, Van Fraassen notes his third point: we must consider "whether [an explanation] is made wholly or partially irrelevant by other answers that could be given." (146-7) I would add that this third aspect of Van Fraassen's 'because'-statement evaluation is merely a reiteration of Grice's Co-Operation Principle, in

[24] Assuming the religious context, perhaps a Sunday school lesson, of the example.

that we should give the most informative, yet concise contribution as is determined by the conversational context. Thus it is inappropriate to give a lengthy medical analysis of Bob's accident to a three-year old, just as it is inappropriate for Bob to merely tell the doctor that he came to the hospital because he had a "boo-boo." Similarly, we can judge the second explanation from the above milkman example as a better answer than the first explanation because the second explanation includes an answer to both interpretations of the question; that is to say, the first explanation is made wholly irrelevant by the second explanation.

Also from the milkman example, we can see Van Fraassen's dependence on the implications which arise from the use of 'because.' Through his discussion of his evaluation procedure, Van Fraassen depends on 'because' to indicate that such-and-such is the answer. Moreover, he claims that 'because' indicates that such-and-such is a good answer, *the* answer. Yet, his theory is without an account of how and/or why 'because' makes this implication. Thus I conclude that my modified-Rieberian theory of 'because' complements Van Fraassen's theory of pragmatic explanation by supporting the assumptions he makes about the implications made by 'because' in his pragmatic theory of explanation and in his evaluation procedure for explanations.

3.4 Expanding Van Fraassen's Account to 'Therefore'

As we demonstrated in Chapter One, 'therefore' and 'because' are functionally equivalent. In Chapter Two we used this equivalence to apply Rieber's theory of 'therefore' to 'because' in order to account for the meaning of 'because.' Now, however, we can work in the opposite direction, and apply Van Fraassen's theory of explanation, based as it is on 'because,' to 'therefore.' In this way we can expand Van Fraassen's account of explanation to include 'therefore'-explanations. I claim that just as Van Fraassen says that 'because' (may) indicate that a statement is an answer, in fact, *the* answer, so too should he say that 'therefore' may indicate that a statement is an answer, *the* answer. Thus we can and should expand Van Fraassen's account of answers to 'why'-questions, which he gives solely in terms of 'because'-answers, to include 'therefore'-answers.

Earlier we discussed the presuppositions Van Fraassen claims are carried by 'because'-explanations. Van Fraassen writes that 'because'-explanations presuppose the topic, select the appropriate member of the contrast class, while implicitly denying the other members o the contrast class, and claiming that the selected member(s) of the contrast class bear the proper relevance relation to the topic. Applying this account to 'therefore,' we can say that 'therefore'-explanations are answers to 'why'-questions which presuppose the topic, select the appropriate member of the contrast class, while implicitly denying the other

members of the contrast class, and claiming that the selected member(s) of the contrast class bears the proper relevance relation to the topic.

Van Fraassen's evaluation procedure for 'because'-answers, can be mirrored with an evaluation procedure for 'therefore'-answers. Van Fraassen says that a given 'because'-answers should make the topic more probable than the other members of the contrast class, should favours the topic to a greater extent and should make partially or wholly irrelevant the other answers that might have been given. (Van Fraassen, 146-7) We can easily apply these criteria to 'therefore'-answers, and state that 'therefore'-answers should be more probable than the other members of the contrast class, should favour the topic to a greater extent and should make partially or wholly irrelevant the other answers that might have been given.

Given the equivalence relation I established in Chapter One, we have expanded Van Fraassen's account of explanation to include 'therefore'-answers. We have applied Van Fraassen's account of 'because'-answer presuppositions and his evaluation procedure for 'because'-answers to 'therefore'-answers, and in doing so have come up with a more comprehensive account of explanation.

Conclusion

In the first chapter, I discussed some of the differences and similarities between arguments and explanations. The main difference cited by Govier and Kelley is simply the purpose of the statement: arguments work from known premises to an unrealised conclusion, while explanations speculate as to the antecedent conditions of a known situation. However, structurally arguments and explanations are very alike. Furthermore, I demonstrated in Chapter One, that 'therefore'-statements, and 'because'-statements are interchangeable. Thus I concluded that the indicator words 'therefore' and 'because' must indicate the same thing, and in so doing, have the same pragmatic meaning of indicating either an argument or an explanation.

Contemporary logic texts agree that 'therefore' may indicate either an argument or an explanation. Moreover, they agree that 'because' may also indicate either an argument or an explanation. Finally, they agree that in many cases, only in light of the context of the utterance can one determine if a 'therefore'-statement or a 'because'-statement is an argument or an explanation.

My intuition agreed with the contemporary logic texts. However, possibly the most influential article written about 'therefore' and 'because' did not. Gilbert

Ryle, in his article, "'If,' 'So,' and 'Because,'" states that 'because' always indicates an explanation. None of the logic texts explained the discrepancy between this famously held position, and their own. Thus it seems they had merely ignored Ryle's arguments when making their own claims. However, if the current views are correct, there must be answers to Ryle's arguments. Thus, I end Chapter One with a discussion of Ryle's arguments, and a reply to those arguments.

Having answered Ryle's arguments against 'because' as an indicator of argument and explanation, and against the separation in function between 'therefore' and 'because,' I attempt to account for the meaning of 'because' by means of Steven Rieber's theory of 'therefore.' After making a few modifications, I apply this theory to 'because' and thus reach a pragmatic account for the meaning of 'because.' My modified-Rieberian theory of 'because' claims that 'because' carries a conventional implicature, a tacit performative, which suggests that a statement is either an argument or an explanation, and suggests that there might be missing premises/explanans.

One of the benefits of my Rieberian accounts of 'because,' is that it allows 'because' to be a meaningful term while remaining causally-neutral. Associated as 'because' obviously is with causation, one might think 'because' would then carry the mystery and confusion which surrounds causal theory since Hume's

infamous discussion of causation. My modified-Rieberian theory of 'because' sidesteps the mysticism of causation. My modified-Rieberian theory of 'because' does not refer to any theory of causation, and furthermore, my modified-Rieberian theory of 'because' only incidentally relies on causation, and theories of causation; my modified-Rieberian theory of 'because' relies on causation only so far as causation is involved in arguments and explanations. Given our uncertainty over causal relations, it seems to me that the lesser the dependence on causation, the better, and therefore I believe the modified-Rieberian theory of 'because,' which has only an incidental tie to causation, is superior to any referential theory of meaning of 'because,' which would refer directly to the unknown and mysterious. By my account, both 'therefore' and 'because' get their meaning from their use, not from any ties to causation or causal terms, and thus their meanings are not dependant upon any tie to causal theory. My Rieberian 'therefore' and 'because' need not support, or be supported by, any particular causal theory; they are flexible, able to adapt to our different historical, contemporary, and future scientific and philosophical theories of causation.

Furthermore, my modified-Rieberian theory of 'because' when combined with Van Fraassen's pragmatic theory of explanation, gives us a comprehensive account of explanation. My modified-Rieberian theory of 'because' specifically describes by means of conventional implicature, tacit performatives, and Grice's co-operation maxim, how 'because' indicates an explanation, and in doing so

complements Van Fraassen's claims about explanations. Furthermore, with my modified-Rieberian theory of 'because' supporting Van Fraassen's evaluation procedure for explanations, we are able to better understand and judge 'because'-explanations and their applications. Van Fraassen's pragmatic theory of explanation in fact needs the foundation of my modified- Rieberian account of 'because' to explain Van Fraassen's mentions of the "indications" made by 'because.' In these ways, Van Fraassen's pragmatic theory of explanation is supported by, and, in turn, supports my modified-Rieberian theory of 'because.'

Finally, we can see that the benefits of my modified Rieberian theory of 'because,' causal-neutrality, and independence from the argument/explanation debate, carry over into this comprehensive account of explanation. The combination of my modified Rieberian theory of 'because' and Van Fraassen's pragmatic theory of explanation, is free from any dependence on a particular theory of causation. This account of explanation is able to accommodate past, present and likely future theories of causation. This account of explanation is independent of the controversy about the division of argument and explanation. Neither Van Fraassen's theory, nor my theory, is reliant on a particular distinction between arguments and explanations, or on some overlap between the two concepts. This comprehensive account of explanation, founded on my modified-Rieberian account of 'because,' is flexible, and able to adapt to the many debates about these issues.

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